



**Additional chart coverage may be found in CATP2, Catalog of Nautical Charts.**

## SECTOR 5 — CHART INFORMATION

## SECTOR 5

### NORTHWEST COAST OF KYUSHU (INCLUDING OFF-LYING ISLANDS)

**Plan.**—This sector describes the NW coast of Kyushu from Tomino Hana (Myoken Saki), on the S side of the W approach to Kanmon Kaikyo, then SW to Ushigakubi; then S to Nomo Saki and the off-lying islands of Okino Shima, Iki Shima, Goto Retto, and Danjo Gunto.

#### General Remarks

**5.1** The NW coast of Kyushu extends SW from Tomino Hana (Myoken Saki) for about 66 miles to Ushigakubi, on the E side of Hirado Seto, and then S for 51 miles to Nomo Saki. A number of islands and islets lie within 30 miles of its N part and within 85 miles of its S part. The coast line is mountainous and indented with many bays and inlets. The two major ports of Sasebo and Nagasaki are described in this sector.

#### Tomino Hana to Nishiura Saki

**5.2 Tomino Hana** (Myoken Saki) (33°56'N., 130°41'E.), on the S side of the approach to Kanmon Kaikyo, lies about 2 miles NE of Kario Hana. It is 25.3m high, and its upper part consists of a conspicuous brown cliff. Manako Sone, with a depth of 1.8m, lies about 0.5 mile NW of Tomino Hana. A lighted tower is situated on the NE side of the headland.

Ashiya Ura is located at the mouth of the Onga Kawa, about 3 miles SW of Tomino Hana. The bay is protected on its N side by a chain of reefs that extends about 1 mile to the NW. Two small islets lie on the S side of the reefs. The town of Ashiya lies on the SW side of the Onga Kawa, near its mouth.

**Hatsu Saki** (33°53'N., 130°34'E.) lies about 6.5 miles SW of Tomino Hana and consists of high cliffs of volcanic rock. Hatsushiro Se (Hatu Siro Se) is a detached rocky shoal with a depth of 1.2m, and lies 2.25 miles N of Hatsu Saki. A light is shown from the point.

Kaneno Misaki is a prominent point lying 2 miles E of Hatsu Saki. An isolated rounded hill, 51.5m high and thickly wooded, is located on the point. Kanesaki Ko, a small fishing harbor protected by breakwaters, is located about 0.8 mile S of the point. A light is shown from the head of the N breakwater. Two lighted buoys are moored 0.25 mile and 0.15 mile NNE, respectively, of the head of the breakwater.

**5.3 Konominato Ura** (33°52'N., 130°30'E.) is entered between Kaneno Misaki and Ku Saki, 3 miles to the SW. The bay is protected from the N by the island of Jino Shima and from the NW by O Shima. The holding ground in the bay is considered poor, and because of the dangers in its approach, it should be avoided except in an emergency. A submarine cable is laid from the coast, close E of the entrance to Turi Gawa, to O Sima.

Jino Shima is located with its SE extremity about 1 mile NW of Kaneno Misaki. A very shoal spit of gravel extends SSE from the SE extremity of the island, almost to the mainland, and is usually marked by breakers. Submarine cables are laid at

Jimo Shima, from Oshima and the mainland, as indicated on the chart. Foul ground off the NW side of the island is marked by navigational aids. Several fish havens lie within a radius of 2 miles from NNW to ESE of the N point of Jino Shima.

**O Shima** (33°54'N., 130°26'E.), the summit of which attains an elevation of 217m, is located about 3 miles W of Jino Shima. The island is a good landmark for vessels approaching Kanmon Kaikyo from the W. When wind and tidal currents are in opposition, there are heavy seas off the NW extremity of the island. The entrances to the harbor are protected by detached breakwaters. A fishing village is situated in a cove on the E side of the island. A light is shown from the NW side of the island.

Kurara Seto, the channel between O Shima and the mainland, is encumbered with shoals and should not be used except by vessels with local knowledge entering Konominato Ura. A number of underwater cables cross Kurara Seto. Buoys mark only a part of the foul ground in the channel.

**Caution.**—A dangerous wreck has been reported in position 33°52'48"N, 130°26'24"E.

**5.4 TsuyaSaki Hana** (33°48'N., 130°27'E.) and Tate Saki, about 2 miles N, are the SW and NW extremities, respectively, of a small conspicuous peninsula, located about 5 miles SSW of Konominato Ura. A light is shown from TsuyaSaki Hana. The town of TsuyaSaki lies close NE from the point. A tower stands about 1 mile S of Tsuyasaki Hana Light.

Aino Shima, 76m high and flat, lies about 4.5 miles WSW of TsuyaSaki Hana. The island is wooded and its NW side consists of steep cliffs. There are two islets which are connected to it by a rock ledge at LW. It has been reported to be a good radar mark. A submarine cable is laid between the SE side of the island and the mainland. Hanguri Se, a rock 22m high, lies close off the E extremity of the island. Temporary anchorage can be obtained by vessels with local knowledge in a light on the S side of the island. Lights are shown from the NW and SE sides of Aino Shima.

Fish havens are situated within 1.75 miles NW and NE of the N side of Shika Shima, and within about 4 miles of Aino Shima.

Numerous fish havens lie up to 2 miles offshore between Shika Shima and Tsuyasaki Hana, 9.5 miles NE.

A small harbor, which is protected by breakwaters, is situated 5 miles ENE of the summit of Shika Shima.

**Kurinokami Sho** (33°48'N., 130°16'E.), about 5.5 miles NW of the summit of Aino Shima, is a group of rocks, some of which dry from 0.5 to 1.7m. There is a lighted beacon in the middle of the reef. It has been reported that there are wrecks about 3 miles SE, 4.75 miles S, and 5 miles W of Kurinokami Sho Lighted Beacon.

#### Fukuoka Wan

**5.5 Fukuoka Wan** is entered between **Nishiura Saki** (33°40'N., 130°13'E.) and Myojin Hana, the NW extremity of Shikano Shima. The entrance is divided into three channels by

a number of islands and dangers, but only the easternmost is recommended for ocean-going vessels.

**Aspect.**—Genkai-jima lies about 1.5 miles NE of Nishiura Saki. Lights are shown from its NE side and from a breakwater standing on its S coast. The coastline of the island is mostly cliffy. Hashira-jima, a pointed pillar-shaped rock, lies about 0.4 mile NW of Genkai-jima, with shoal water between the two. Ino Se, a detached shoal, with a depth of 9.8m, lies about 1 mile N of Hashira-jima. Kuro Se consists of three above-water rocks which lie in close proximity N of Genkai-jima. The depth of water within the bay is deep to the W of Noko-no-Shima and it is suitable as an anchorage for large vessels; however, the majority of the area within Hakata Ko to the E is shallower than 10m.

**Ko-tsukue Shima** (33°40'N., 130°13'E.) and O-tsukue, close N, lie about 0.8 mile SW of Genkai-jima. The islets lie on the NW edge of a shoal, which is located in the NW entrance to Fukuoka Wan. A buoy marks the S end of the shoal.

Shikano Shima lies about 3 miles ESE of Genkai-jima, on the E side of the main entrance to Fukuoka Wan. The SE extremity of the island is connected to a narrow sandy isthmus forming the N side of Hakata Ko. Shoal water extending out 1.25 miles from the NW coast of the island is marked by a buoy.

There is a small harbor, protected by breakwaters, on the W side of Shika Shima. A light is shown from the head of each breakwater. A detached breakwater lies close S of the harbor entrance; a light is shown at each end.

### Hakata (33°36'N., 130°24'E.)

World Port Index No. 62430

**5.6** The Port of Hakata, a major specified port of entry, is located in the E part of Fukuoka Wan. It consists of a natural outer harbor and an artificial inner harbor, with berthing for large vessels. The harbor area occupies the greater part of Fukuoka Wan. The harbor is further divided into Harbor District No. 1 to Harbor District No. 4 and a fairway.

The entrances to the harbor are on the N and S sides of Noko-no-Shima. The entrance on the N side is the main one and has soundings of 14 to 20m. The depths are shallower closer in. In the center part of the harbor there are many depths of 7m. The largest ship to have entered the harbor was 46,445 grt.

### Winds—Weather

The W part of Fukuoka Wan is protected from W winds, but N winds send in a heavy sea. When cold fronts pass during the winter, strong NW winds develop.

Local storm signals are shown at the meteorological observatory, about 0.8 mile S of the mouth of the Naka Gawa, also on the E side of the entrance of the boat basin.

Weather signals, by flashing light, are displayed from the roof of the Port Authorities Building, at the root of Middle Wharf.

### Tides—Currents

The MHW interval in Hakata Ko is 9 hours 40 minutes. Spring tides rise 1.9m; neap tides rise 1.4m.

The flood current sets SE in the entrance of Fukuoka Wan and in the vicinity of Nokono Shima; the ebb current sets nearly in the opposite direction. The tidal current turns 1 hour before HW and LW, and both currents attain a rate of about 1 knot. Within the harbor the tidal currents are weak and the rate does not exceed 0.5 knot.

### Depths—Limitations

The channel leading to the entrance at the breakwaters and continuing N to Hakozaki Wharf has been dredged to 11.9m. The following berths are available:

Wharf Name	Berth No.	Berth length	Berth depth
Hakata Pier	2	105m	5.5m
	3	147m	7.5m
Hakozaki Wharf	1-3	390m	7.5m
	4	185m	10m
	5	270m	12m
	6-10	650m	7.5m
	11	230m	7.5m
	12-13	480m	12m
	Timber	360m	10m
	Timber (dolphin)	280m	10m
Higashihama Wharf	1	200m	4.5m
	2	80m	5.5m
	3	430m	5.5m
	4	390m	7.5m
	5	310m	7.5m
Middle Wharf	3	130m	7.5m
	4-6	556m	10m
	7-8	360m	5.5m
	9-11	390m	7.5m
	12	161m	6.5m
Suzaki Wharf	1	130m	7.5m
	2-4	553m	11m
	5-6	260m	7.5m
	7-10	450m	5.5m
	Nagahama No. 1	360m	5.5m
	Nagahama No. 2	360m	5.5m



The Middle Wharf projects NW from the shore on the W side of the mouth of Mikasa Kawa and functions as an international passenger terminal. Hakozaki Wharf lies on reclaimed land in the N part of the inner harbor and functions as an international trade hub. Higashihima Wharf lies close S of the S side of Hakozaki Wharf and is used for the transfer of LNG and construction materials. Suzaki Wharf projects NW from the shore on the W side of the mouth of Naka Kawa and is used mainly for grain distribution.

Hakata Pier serves as a domestic services and ferry terminal. Two berths at Kashii Park Port, along with one berth at Hakozaki Wharf, serve as the main container terminals. The two berths at Kashii Park Port have a total length of 600m and a depth of 13m alongside. The Hakozaki berth is 270m long, with a 12m depth alongside. The Aratsu Oil Center has ten berths, each having a depth of at least 5.5m, and one berth with depths less than 5.5m.

A bridge, with a vertical clearance of about 3.8m and marked by lights, connects Suzaki Wharf and Aratsu Oil Center, and spans the entrance to Hakata Fishing Harbor.



**Hakata—Hakozaki Wharf**



**Hakata—Suzaki Wharf**



**Hakata—Middle Wharf**

## Aspect

**Abura Yama** (33°30'N., 130°22'E.), a good landmark, rising about 7 miles SSE of the summit of Nokono Shima, is located in Fukuoka Wan, 1 mile S of Shikano Shima.

Bishamon Yama, a conspicuous wooded hill with a sharp summit, rises in a position about 2 miles WSW of the summit of Nokono Shima; it is a useful mark for vessels entering Imazu Wan.

Four white chimneys on the E side of Hakata Ko, on the N side of the mouth of the Tatara Gawa, are conspicuous.

Ha Shima, about 1.8 miles ENE of the E extremity of Nokono Shima, forms a good landmark.

## Pilotage

Pilots are not compulsory, but recommended. Pilots are available from 0500 to 2400, and board 0.5 mile N of Nokono-

shima Light; pilots are also available 24 hours for full container ships. Call "HAKATA-HO-AN" on VHF channels 12 and 16.

## Regulations

A pier for the sole use of vessels discharging liquefied petroleum gas is situated on the S side of Saito Saki, situated about 1 mile E of Ha Shima. When such a vessel is moored or mooring alongside the pier, no other vessel may approach within a distance of 45.7m. In addition, a red flag will be displayed at the pier. Three lighted buoys, each exhibiting a red light, mark the restricted area.

Any vessel without a funnel net to prevent fire or one with insufficient fire control should not enter the area.



Hakata—Hakata Pier



Hakata—Aratsu Oil Center



Hakata—Higashihama Wharf

## Anchorage

Anchorage, sheltered from N winds, can be obtained in Fukuoka Wan off the S side of Shikano Shima; protection from the W winds can be obtained in the lee of the peninsula that forms the W side of Fukuoka Wan.

Anchorage, limited by draft, can be had practically anywhere in Hakata Ko, but a position SW of Saito Saki is recommended during strong N winds, and off the E side of Nokono Shima when W winds prevail.

An area of prohibited anchorage, as delineated on the chart, lies in the SW section of the harbor.

The quarantine anchorage is situated on the NE side of Nokono Shima. The anchorage is marked by a buoy.

**5.7** The coast between Nishiura Saki and Hotoke Saki, about 8 miles SW, is backed by a number of conspicuous, detached, pointed hills, the summits of which are thickly wooded. **Kaya San** (33°34'N., 130°10'E.), the most conspicuous of these hills, is 379m high. From the N, this hill appears flat-topped, but from the E or W, it appears pointed.

**Nishiura Saki** (33°40'N., 130°13'E.), is a well-defined point rising to an elevation of 156m close within the headland. A light is shown from the point. Nagama Se dries 0.6m and lies about 4 miles NW of Nishiura Saki.

**Nogita-Todai Se** (33°39'N., 130°07'E.) is a group of rocks located 4.5 miles W of Nishiura Saki. The highest rock reaches an elevation of 1.9m and forms a good radar target up to 5 miles. A light is shown from the N side of the rocks. A wreck lies about 1.5 miles E of the light. A fish haven is also situated about 0.7 mile SSW of Nogita-Todi Se.

Oto Saki, a precipitous headland consisting of black rocks in the form of square columns, is located about 6.5 miles SW of Nishiura Saki.

**Hotoke Saki** (33°34'N., 130°05'E.) is the E entrance point of Karatsu Wan. The point is cliffy and located about 1 mile SW of Oto Saki, and is dominated by Tateishi Yama, a prominent brown hill, 208m high. A light is shown from No Se, about 0.8 mile S of Hotoke Saki, marking the edge of foul ground.

## Karatsu Wan

**5.8** Karatsu Wan is entered between Hotoke Saki and Kawaraki Saki, located about 8 miles to the WSW of Hotoke Saki. The bay extends for about 6 miles N and S, and about 11 miles E and W. The shores of the bay are generally sandy beaches; rocky headlands jut out and the mountains to the S of the bay are extremely steep. The bay is capable of providing sheltered anchorage to ocean-going vessels. Kashiwa Shima and Hime Shima lie in the entrance of the bay, dividing it into three channels, the middle being better. The Port of Karatsu, in the SW part of the bay, is a busy coal port.





**Hakata Bridge**



**Hakata—Kashii Park Port**

**Karatsu (33°29'N., 129°58'E.)**

World Port Index No. 62420

**5.9** The Port of Karatsu is approached between Oka Saki and Kushi Saki and stands in the extreme SW corner of Karatsu Wan. The harbor is divided into Nishi Ko (West Harbor) and Higashi Ko (East Harbor). The harbors are separated by O Shima, which has a lighthouse on its N side and is connected to the mainland at its SW end by an area of reclaimed land.

The W sector is more active commercially. Depths range from 7 to 11.9m. Anchorage exists for over 100 vessels, including those of 30 to 5,000 grt capacity. Approximately 40 vessels use the port annually.

**Winds—Weather.**—During the summer, SE winds predominate; during the winter, NW or SW are prevalent.

Conditions are usually calm within the harbor throughout the year; however, since the harbor is open to the NE, large waves enter during strong N winds, which occur mostly during the winter months.

**Tides—Currents.**—The MHW interval is 9 hours 26 minutes; spring tides rise 2m and neap tides rise 1.5m.

The tidal currents flow ENE during the flood and WSW during the ebb. The rate seldom exceeds 1 knot.

**Depths—Limitations.**—A depth of 7.6m is maintained in the approach channel to the main pier in Nishi Ko (West Harbor). There is a least depth of 5.8m in the approach channel to the main pier in Higashi Ko (East Harbor).

The depths in Higashi Ko (East Harbor) are inclined to decrease because of the outflow of mud from the Matsuura Gawa.

Extensive berthage for vessels up to 3,000 grt is available for handling general and bulk cargo, such as coal in Nishi Ko (West Harbor) and Higashi Ko (East Harbor). Liquefied gas is handled at the Bridgestone Dolphin Jetty by vessels up to 60,000 dwt.

The following berths are available:

Berth	Length	Depth
Pier No. 1	49m	5.1m
Pier No. 2	89m	4.5m
Pier No. 3	164m	4.5m
Pier No. 4	109m	7.0m
Pier No. 5	54m	3.9m
Oshima Pier	220m	7.4m
Oshima S Pier	342m	5.4m
Commerce/Industry Pier	199m	4.5m
Dolphin Pier	364m	7.4m

There are two embankments for loading coal, their depth alongside being 5.5m. Three mooring buoys also exist, two to take one vessel each of 1,000 to 2,000 grt, and one to take one vessel of 3,000 to 4,000 grt.

A gas terminal is available for vessels up to 60,000 dwt at the Bridgestone Dolphin Jetty; maximum draft is 11.7m.

**Aspect.**—Ukidake Yama is very conspicuous among the mountains at the head of Karatsu Wan; it rises 805m, about 3 miles ESE of Kushi Saki.

Taka Shima, at the NE end of Karatsu Ko, is surmounted by a 170m conical hill; it is a good landmark for entering the harbor.

There is a conspicuous white building at the quarantine station at **Myoken** (33°28'N., 129°57'E.) ([World Port Index No. 62410](#)), which is situated on the mainland SW of O Shima. A broad area of reclaimed land extends 0.5 mile NNW from Myoken to form Myoken Wharf, 600m long. There are three berths on the E side, with depths from 8 to 12m alongside.

**Pilotage.**—Pilotage is not compulsory. Pilot boards off Kashiwa Shima, if required.

**Anchorage.**—It is possible to avoid the N winds to some extent by the shelter afforded by Oka Saki in a position where the depths within Nishi Ko are about 7m. Depths within the anchorage on the W side of O Shima are from 7 to 10.1m. It has been reported that Higashi Ko is a better anchorage than Nishi Ko during NW winds, in a position between O Shima and Tori-jima, where the depths are from 7 to 9m.

The quarantine anchorage is situated about 0.8 mile NNW of O Shima.

**Caution.**—Caution is necessary as a foul area and a fish haven are situated in the N corner of the anchorage.

**Kashiwa Shima to Hado Misaki**

**5.10 Kashiwa Shima** (33°32'N., 129°58'E.) is located 1.25 miles N of Oka Saki. On the W side of the island, there is a cove formed by a narrow spit of sand and gravel, but the depths in it are shoal. The channel between the island and the mainland is about 0.3 mile wide, with depths of less than 7.3m, and is only available to small craft with local knowledge. A light is shown from the W end of the island.

Nanatsugama lies about 2 miles WNW of Kashiwa Shima and is a natural monument. It consists of angular pillars of eroded basalt with seven caves below the pillars.

**Tomo Saki** (33°33'N., 129°55'E.), a precipitous headland, from which a shoal extends about 0.2 mile N, is located 1.25 miles W of Nanatsugama. The town of Komoto lies on the W side of the point. Submarine cables are landed in the bays on either side of the point.

Taka Shima is a rocky, densely-wooded islet, 48m high, located about 0.8 mile NNW of Tomo Saki. The N side of the island forms a steep cliff, and a light is shown from its summit. A small boat harbor, protected by a breakwater on which stands a light, lies on the SW extremity of the island.

A tower 70m high stands 183m N of the breakwater light. A small harbor protected by two breakwaters lies close E of the small harbor on the S side of Taka Shima.

Submarine cables are laid from Taka Shima and Tori Shima, S to the coast. A submarine cable is laid between Taka Shima and O Shima.

**Usu Shima** (33°34'N., 129°54'E.), lying on detached shoals in the main approach to Yobuko Ko, is located 0.5 mile NW of Taka Shima. The islet is flat and marked by a conspicuous stone wall, 7.9m high. A light is shown from the islet. A fish haven is situated close N.

Maru Sone, a detached 8.2m rocky patch, lies about 0.3 mile SE of Taka Shima. It is sometimes marked by tide rips.

**5.11 Kabe Shima** (33°33'N., 129°53'E.) lies on the NW side of Yobuko Ko and about 1 mile W of Taka Shima. The S and SW extremities of the island are fringed with shoal banks extending about 0.2 mile offshore. Bente Seto is a narrow channel between the S end of Kabe Shima and the mainland, and used only by local small craft. A light is shown from the N extremity of Kabe Shima.

Yobuko Ko is located off the SE side of Kabe Shima and about 0.8 mile W of Tomo Saki. The inlet is open to the NE, but is protected by the islets off its entrance. Anchorage can be taken, in 20.1 to 23.8m, gravel. Two breakwaters protect the NE entrance to the inlet. The town of Yobuko lies in the SE corner of Yobuko Ko.

**Nagoya Ura** (33°32'N., 129°53'E.) lies off the S coast of Kabe Shima, about 0.8 mile SW of Yobuko Ko. There is good anchorage, in 22m, gravel, with the lighthouse on Taka Shima in line with the NW islet of Futako Shima bearing 048.5°. The town of Nagoya lies on the W side of the inlet. Nagoya Gyoko, protected by two breakwaters, lies close within the W entrance point of the inlet; a light stands on the N breakwater. These breakwaters were extended.

**Hado Misaki** (33°33'N., 129°51'E.), lying about 1.8 miles W of Kabe Shima, is a rocky peninsula, and from the SW or W appears as a low islet. The peninsula should not be approached within 0.5 mile as it is fringed with reefs on all sides. A light is shown from the point and a lighted buoy marks the reef on the W side of Hado Misaki.

## Off-lying Islands

**5.12 Futagami Shima** (33°36'N., 129°33'E.) is located about 15 miles WNW of Hado Misaki. The islet is 98m high and lies on the W end of Iki Suido. It is saddle shaped and there are no dangers more than 0.2 mile from its coasts. A light is shown from the SW side of the islet. Ko Futagami Shima is 57m high and lies about 1.8 miles WNW of Futagami Shima. Karato Sho, a steep-to rock, 3.3m high, lies about 0.6 mile NE of Ko Futagami. Breakwaters protect the outer part of Yobuko Ko from the N.

Madara Shima lies on the S side of the main fairway through Iki Suido, and is located about 4 miles WNW of Hado Misaki. The island rises to a round flat-topped hill on its E side, but on the W side there is a row of sharp peaks dominated by Ban-shono Tsuju, 238m high. Northwest of this peak and connected with it by a ridge is O Yama, a wooded peak that rises abruptly from the cliffy NW extremity of the island. Both peaks are conspicuous and can be seen a good distance. A light is shown from the SSE corner of the island.

**Matsu Shima** (33°35'N., 129°50'E.), 138m high, lies about 2 miles N of Hado Misaki. The SW end of the island is foul for about 0.2 mile offshore; on this foul ground are several above-water rocks, the largest of which are Take Se and Komatsu Shima, which are 16.5m and 26m high, respectively. Open anchorage can be obtained off the E side of the island.

Kakara Shima, which rises to a height of 123m, lies about 0.5 mile NE of Matsu Shima. The islands are separated by a

channel 0.3 mile wide. Futame Se dries 2.7m and lies on the NE part of a small shoal, about 0.3 mile off the S extremity of the island. Kuro Se, a flat rock 7.3m high, lies close off the SE coast of the island. Lights are shown from the N and S ends of Kakara Shima.

**5.13 Ogawa Shima** (33°36'N., 129°54'E.) lies about 1.3 miles E of Kakara Shima; at its S end are two prominent hills. Me Se, close off the SW extremity of Ogawa Shima, is 7.3m high, and in its vicinity are a number of rocks that dry. Submarine cables run from the S coast of Ogawa Shima to Kakara Shima and to the coast of Kyushu. They also run from Madara Shima to Kyushu.

Amashiri Se lies about 1 mile SSE of the SE extremity of Ogawa Shima and has a depth of 6.7m. From N to S between Amashiri Se and Ogawa Shima lie Hira Se, from which a light is shown; Yakata Se, a black rock, 7m high; and Ori Se, a rock that dries 0.9m.

Iki Suido is the W entrance channel of Genkai Nada, and lies between the NW coast of Kyushu and Iki Shima. It is about 11 miles wide; in it there are a number of islets and shoals with deep navigable channels between them.

## Iki Shima

**5.14 Iki Shima** (33°47'N., 129°43'E.) lies on the NW side of Iki Suido and is located about 10 miles NNE of Futagami Shima. It consists mostly of sand, rock, or lava, and its surface is mainly tableland. Takeno Tsuji, the summit of the island, is in the S part, and rises to a height of 212m. On Take is near the NE extremity of the island and is 156m high. The summit of Tsunokami Yama, 134m high, lies about 2.3 miles NNW of Takeno Tsuji. These three peaks are all good landmarks for approaching the island.

On the SE side of Iki Shima, Iruka Saki, the S extremity of the island, is low, flat, barren, and easily identified. A light stands on the point.

Kagamidake Hana, about 0.5 mile NE of Iruka Saki, is a steep, wooded point, with a pointed summit, 85m high, which is a prominent feature.

Indoji Ura is a cove located about 3 miles NE of Iruka Saki, and affords anchorage, sheltered from the N winds, to small vessels with local knowledge. A light is shown from the harbor entrance breakwater.

Kanajairo Iwa, 11.6m high and white with guano, lies about 1 mile ENE of **Gongen Hana** (33°46'N., 129°48'E.).

On the NE side of Iki Shima, **Ashibe Ura** (33°48'N., 129°46'E.) is a shallow inlet with the village of Ashibe on its S side and the village of Seto on its N side. A light is shown from the S entrance of the inlet. Ashibe Ura affords anchorage to small craft with local knowledge.

**5.15 Uotsuri Sake** (33°51'N., 129°46'E.) is located about 2 miles N of Ashibe Ura. A light is shown from the point.

On the SW side of Iki Shima, **Hozo Saki** (33°44'N., 129°41'E.), the E entrance point of Gonoura Ko, lies about 2.5 miles NW of Iruka Saki. The point is wooded and makes a good landmark.

Kanajiro Iwa, a black rock, 9.8m high, lies on the W side of the approach to Gonoura Ko, about 1.5 miles SW of Hozo Saki.



Sora Sone and Mottaro Se, with depths of 5.8 and 7.6m, rock, lie about 0.5 and 0.75 mile NNE, respectively of Kanajiro Iwa.

**Hira Shima** (33°42'N., 129°38'E.) lies on the W side of the approach to Gonoura Ko, and about 1.8 miles WSW of Kanajiro Iwa. Its summit is bare and its sides consist of steep black cliffs. Tsuru Sone, a detached rocky shoal with a depth of 2.1m, lies about 0.5 mile SE of Hira Shima.

Haru Shima and Naga Shima, both of which are flat and thickly wooded, lie about 1.75 miles NE and 1.5 miles N, respectively, of Hira Shima.

**O Shima** (33°44'N., 129°38'E.), close N of Naga Shima, is separated from Iki Shima by Oshima Seto, a narrow channel, encumbered by shoals, and only used by small craft with local knowledge. A light is shown from the E side of O Shima.

Eboshi Saki lies about 0.8 mile ESE of the NE extremity of O Shima. Hie Sone, with a depth of 3.1m, lies within 0.3 mile S of Eboshi Saki.

**5.16 Gonoura Ko** (33°44'N., 129°41'E.), the principal port on Iki Shima, is entered between Eboshi Saki and Hozo Saki. The port is opened to the S, but affords anchorage sheltered from all other directions. A moderate-size vessel can anchor, in a depth of 22m, with the NW side of Hira Shima bearing 228°, and the summit of O Shima bearing 265°. Gono Se is black and 7m high, upon which stands a light. It is situated 1.25 miles W of Iruka Saki.

The inner harbor is narrow and suitable only for small vessels. A vessel of 600 grt is the largest that can be accommodated alongside in the inner harbor. Submarine cables are landed in Gonoura Ko, W of Eboshi Saki.

On the NW side of Iki Shima, Hansei Ura, located about 2.5 miles NE of O Shima, is exposed to the NW and cannot be recommended as an anchorage. The inlet has a number of shoals, with depths of less than 9.2m, and at times is exposed to heavy swells.

**Yunomoto Wan** (33°50'N., 129°40'E.) lies about 2.5 miles N of Hansei Ura and is only suitable for small vessels with local knowledge. Tenaga Shima, the W entrance point of the inlet, shows a light. The inlet is exposed to heavy swells when NE gales sweep around the NW end of Iki Shima.

Katsumoto Ko lies between the NW end of Iki Shima and several islets close offshore. The largest of the islets is Wakamiya Shima, which shows a light. The islets afford very little shelter to Katsumoto Ko, but on its S side is a cove, protected by breakwaters, which allows shelter to small vessels. The town of Katsumoto lies in this cove. In good weather, vessels anchor outside the breakwaters, in 5.8 to 18m, good holding ground.

## Outer Islands

**5.17 Na Shima** (33°44'N., 129°52'E.) is a group of islets lying on a rocky shoal, on which are numerous above-water and submerged rocks lying about 8 miles N of Kakara Shima, about 3.5 miles ESE of Gongen Hana on the E side of Iki Shima. The largest islet is Mae Shima, flat-topped and 17.7m high. A number of rocks and foul patches lie up to 2.5 miles off the E and S sides of Na Shima. A light is shown from the S islet.

A small harbor, which is protected by two breakwaters, is situated on the NE side of Haru Shima.

**Eboshi-jima** (33°41'N., 129°59'E.), lying 7 miles ESE of Na Shima, is 43m high and is steep-to on all sides. From the NW and N, it has a rugged appearance and from the E, it presents a pointed summit. A light is shown from the summit of the islet.

**Orono Shima** (33°52'N., 130°02'E.), an island with two peaks, the S one of which is 109m high, lies 11 miles NNE of Eboshi-jima. Close off its N extremity are two above-water rocks, but the island can be approached to within 0.75 mile on all sides. Two fish havens are situated within 0.75 mile W of the W side of Orono Shima. There is a small settlement and a breakwater on the S end of the island. A light is shown from the S end of Orono Shima.

**Okino Shima** (34°14'N., 130°06'E.), steep-sided and densely-wooded, lies about 23 miles NNE of Orono Shima. Its summit is 244m high and lies almost in the center of the island. Shoal water with above-water rocks extend out 0.75 mile from the S side of the island. A light is shown from the summit of Okino Shima. A small settlement is situated on the S side of the island.

Nada Saki is a rocky point located about 0.8 mile S of Hado Misaki. Close S of the point is a cove, of which both entrance points are foul. Kuro Se, a rock 3.4m high, is joined to the S entrance point of the cove by a shoal that dries.

**5.18 Kushino Ura** (33°31'N., 129°51'E.), a narrow inlet on the NE side of the peninsula that terminates in Kushi Saki, is located about 1 mile S of Nada Saki. The inlet is sheltered, except from the NW, but its head is shoal and only available to small vessels with local knowledge.

Hokawazu Ura, a narrow inlet that is entered between Chika Saki and Kushi Saki, is located about 0.5 mile S of Kushino Ura. The inlet is free of dangers, but only used by small vessels with local knowledge. A bridge, with a vertical clearance of 19m, spans the channel at its narrowest part. The town of Hokasu lies midway in the inlet on the W side.

**Chika Saki** (33°31'N., 129°50'E.) is a low, flat, rocky cape, about 0.5 mile W of the mouth of Hokawazu Ura. The cape is green and very conspicuous from a distance. A submerged rock, with a depth of 4.1m, extends for about 0.4 mile NW from the end of the point. A light is shown from Chika Saki.

**Wakudo Se** (33°29'N., 129°50'E.), 11.6m high, lies on the S end of a patch of foul ground, about 2 miles S of Chika Saki. The N end of the foul patch is marked by Hira Se, an above-water rock. A light is shown from Wakudo Se.

Kariya Wan is entered between Miya Saki and Takaiwa Hana, about 0.8 mile S of Wakudo Se. The inlet affords almost landlocked anchorage, in depths of 9.2 to 21.9m, soft mud. There is good anchorage for small vessels in most parts of the inlet. Several small towns lie within the bay. A light is shown from Takaiwa Hana.

**O Saki** (33°29'N., 129°49'E.) is a steep point surmounted by a grassy hill, 86.6m high, and located about 1.3 miles W of Wakudo Se. A reef extends from the point in a NW direction for a distance of about 0.4 mile. Osakino Se, a 4m rocky patch, forms the offshore extremity of the reef.

## O Saki to TsuSakino Hana

**5.19 Muku Shima** (33°29'N., 129°47'E.) lies in the approach to Hibi Suido, and about 1.5 miles W of O Saki. The

summit of the island is partly wooded and lies on its S end. The island is surrounded by foul ground and above-water rocks. Aka Se, a reddish brown islet, 11m high, lies about 0.8 mile SSE of Muku Shima. A detached rock, with a depth of 1.8m, lies 0.1 mile ENE of Aka Se.

Ki Se, about 0.3m high, lies about 0.5 mile ENE of Aka Se and is usually marked by breakers. The rock is marked on its W side by a lighted buoy. A light is also shown from the summit of Muku Shima. Submarine cables are landed on the SE side of Muku Shima.

Hibi Suido lies between the NE side of Taka Shima and the mainland, and is approached between Ao Saki and O Saki, about 2 miles to the NE. Several points on either side of the channel are fringed with reefs that dry out. Owing to the dangers between Muku Shima and the mainland, vessels using this channel should pass between Muku Shima and Taka Shima. Daziku Ura, on the E side of the N end of Hibi Suido, is entered S of Kondomari Hana, a point about 1 mile S of O Saki. Mo Se, a rocky spit on which lies a rock, awash, extends about 0.3 mile SW from Kondomari Hana.

Daziku Ura affords anchorage, sheltered from all except NW winds, in depths of 10.1 to 18.3m, mud.

The depths in Hibi Suido are sufficient to accommodate deep-drafted vessels, but passage should not be attempted without local knowledge.

**5.20 Taka Shima** (33°26'N., 129°45'E.) is the largest of the islands in the entrance of Imari Wan; Ao Saki, its N extremity, is located about 1.5 miles SW of the light on Muku Shima. The island is fringed by shoals and foul ground, and is indented with a number of bays and inlets.

Kuro Shima lies about 1.5 miles WSW of Ao Saki. The island is flat-topped, its summit is 95m high, and wooded. The island is fringed with foul ground, close offshore, except from the N to E, which is clear of danger. Hitotsu Se, marking the E extremity of the island, is a rock that dries 2.7m. Kuroshima Seto, the channel between Kuro Shima and Taka Shima, is mostly foul and not recommended without local knowledge.

Submarine cables are laid from Taka Shima to Kuro Shima. Special lighted buoys are located 0.75 mile E and 0.75 mile SE of the S extremity of the island.

**Uokono Shima** (33°25'N., 129°43'E.), lying close off the SW corner of Taka Shima, is fringed by a shoal bank extending about 0.1 mile offshore. A light is shown from its summit.

Izu Shima, 31m high and wooded, lies about 1 mile NW of Uokono Shima. The islet is fringed by a shoal bank and spit, with a depth of 3.1m over its extremity, and extends about 0.2 mile E from its E end.

**Ao Shima** (33°25'N., 129°41'E.), the W island in the approach to Imari Wan, is located about 0.5 mile S of Izu Shima. Its summit, 58m high, is at its S end. The island is rugged, thickly wooded, and foul on its W side for 0.15 mile offshore. The NE side of the island is foul offshore for almost 0.5 mile.

TsuSakino Hana, the N extremity of the Hoshika peninsula, lies on the S side of TsuSaki Suido, and about 1 mile SW of the summit on Ao Shima. A light is shown from the point.

## Imari Wan

**5.21 Imari Gaiwan** (33°23'N., 129°44'E.) is the outer and larger part of Imari Wan. The safest channels to enter the bay are Ao Shima Suido and TsuSaki Suido. The bay is indented with a number of inlets and coves. Small towns and villages situated throughout the shores of Imari Gaiwan. The bay is deep and fairly free of dangers.

Futa Shima, the W islet, is in two parts, connected by a bank of gravel and sand that dries. Both parts are thickly covered with trees and lie about 1.3 miles SE from the S end of Taka Shima.

**Tobi Shima** (33°24'N., 129°47'E.) is the E and largest of the islets, and lies about 1 mile E of Futa Shima. It has two summits, the higher, with an elevation of 84m, stands on the SE side of the islet.

Two submarine cables and a submarine water pipeline cross the fairway between Tobi Shima and the mainland S.

Ko-Tobi Shima is the S islet of the group and lies close S of Tobi Shima. The channel between the two islets is shoal.

**Yama Shima** (33°24'N., 129°47'E.) is the N islet and lies almost 0.5 mile NNW of Tobi Shima. Rocky shoals extend about 230m to the N and SE of the islet.

Fuku Shima, a large island, separated from the mainland by a tortuous channel on its E side, lies about 1 mile E of Tobi Shima. The coves on the NE and SE sides of the island are obstructed by islets, reefs, and shoals, and are only used by small craft with local knowledge.

Imari Ko is entered between Kanai Hana, on the mainland, and the W side of Fuku Shima, and lies in the S part of Imari Wan. A shoal bank extends, in places, about 0.3 mile from the W side of the harbor, and on the E side of the central part of the harbor there are a number of islets and rocks. The head of the harbor is shoal.

**5.22 Imari** (33°17'N., 129°53'E.) ([World Port Index No. 62400](#)) contains three offshore mooring buoy berths, with depths of 10.1 to 14m; the deepest depth is at Buoy No. 3. Vessels with a draft of 12m and up to 60,000 dwt have moored in Imari Ko.

Kubara North Quay, on the SE side of reclaimed land S of the basin, has depths of 7.1 to 10.1m alongside.

A small basin lies between Kubara North Quay and Kubara South Quay. There are three berths, with depths of 5.5 to 10m alongside, at Kubara South Quay.

An overhead power cable, with a vertical clearance of about 52m, spans the water W of the reclaimed area.

There is a tanker berth accommodating vessels up to 70,000 dwt in a depth of 14m.

**Pilotage.**—Pilots are available in position 33°25.4'N, 129°42.7'E and at the quarantine position. Pilots can be contacted on VHF channel 16.

**Anchorage.**—Imari Wan affords good anchorage to a large number of vessels, in depths from 14.6 to 36.6m, as convenient. The bottom is mostly mud, and the tidal currents do not exceed 0.5 knot.

The quarantine anchorage lies on the W side of Imari Ko. The harbor affords good anchorage in depths of 9.2 to 18.3m, mud.

**Caution.**—A wreck lies about 0.5 mile S of Siraiwa Hana.

## TsuSakino Hana to Ushigakubi

**5.23 Nagato Saki** (33°22'N., 129°37'E.) is located 3 miles SW of TsuSakino Hana and forms the W entrance point to Kamada Ura. The point is steep-to and backed by high hills; its shores are fringed by shoal water, close offshore.

Kamada Ura is entered between Nagato Saki and Magari Saki, the SE extremity of Yoko Shima, about 0.8 mile WNW. Shoal spits, with depths of less than 5.5m, extend about 0.2 mile SE from Magari Saki and ENE from Nagato Saki.

Kamada Ura affords good anchorage, sheltered from all winds, in depths from 9.2 to 12.8m. A vessel entering must keep in mid-channel between Magari Saki and the shore SE of it to avoid the shoal spits extending offshore on either side of the entrance. This anchorage is suitable for vessels awaiting the tide in Hirado Seto, or arriving from N too late to complete the passage of that strait in daylight hours.

**Yoko Shima** (33°22'N., 129°36'E.), a flat islet, 19m high, lies about 1 mile WSW of Nagato Saki. The channel between the islet and the mainland is very shoal.

Ose Saki is a prominent hill located about 1 mile WSW of Yoko Shima. The bay on its E side is foul and unsuitable as an anchorage.

**Ushigakubi** (33°22'N., 129°34'E.) is 42m high, wooded, and lies about 0.5 mile WSW of Ose Saki. The point is fringed by foul ground close to shore. A lighted buoy marks the W side of the foul ground. During the S tidal current, tide rips are usually formed close N of the point. Kamo Se, marked by a lighted buoy, dries 1.2m, and lies on a shoal spit that extends about 320m NE from Ushigakubi.

**Hiro Se** (33°23'N., 129°34'E.), a rocky islet, 7.6m high, lies about 0.2 mile N of Ushigakubi. A training wall extends for about 160m from the SW point of the islet and is marked by a light. A light is also shown from the center of Hiro Se.

**Caution.**—A restricted area 0.7 mile WNW of Hiro Se Light extends about 3 miles NNW; its exact boundary may best be seen on the local chart.

## Hirado Seto

**5.24 Hirado Seto** lies between the island of Hirado Shima, on the W side, and the coast of Kyushu, on the E side. It is recommended that vessels without local knowledge navigate the straits during daylight hours. The N end of the straits is very narrow, only 0.1 mile wide near Hiro Se. The tidal currents in this area are very strong and reach up to 6 knots or more at times.

**Pilotage.**—A number of unlicensed pilots, who have a good knowledge of the tidal currents, are based at **Hinoura** (33°21.5'N., 129°34.8'E.), situated on the E side of the strait near its narrowest part.

On the N part of Hirado Seto, **Kuroko Shima** (33°22'N., 129°34'E.), a dark wooded islet, 47m high, lies in the middle of the strait, close off the entrance to the port of Hirado. Manaita Se, with depths of 3.7 to 5.5m, extends about 0.1 mile NE from the islet.

Hirado Ko is a small cove on the W side of the strait and entered between Kanae Saki and Zyotono Hana (Jotono Hana), about 320m to the N. A wharf, which extends about 90m NW from the shore, with depths of 2.1 to 3m alongside its outer

face, is situated on the S shore of the cove. There is a small harbor protected by N and S breakwaters S of Kanae Saki. Reclamation was being carried out inshore of these breakwaters. Two small piers project from the N side of the cove. The town of Hirado is situated at the head of the harbor.

**Nanryu Saki** (33°21'N., 129°34'E.) lies on the W side of the strait, about 1 mile SE of Hirado Ko. Two overhead cables, with a vertical clearance of 33m, cross the straits from the point. A bridge, with a vertical clearance of 30m, spans the strait close S of the cable crossings.

Asama, a sandbank with a depth of 2.1m, lies in mid-channel, about 0.8 mile SSW of Nanryu Saki. There is a deep channel on either side of Asama. A lighted buoy marks the N end of the bank.

**5.25 Osaki Hana** (33°20'N., 129°33'E.) lies on the W side of the strait, about 2 miles SSW of Nanryu Saki. The point rises to a hill, 53m high, the summit of which is densely-covered with trees and is very prominent.

Aosa Saki lies on the mainland and is 0.5 mile directly E of Osaki Hana. The point rises to a plateau and is marked by a light. The village of Hokahira lies close S of the light.

**Kawachi Wan** (33°19'N., 129°32'E.) lies on the W side of the strait and is entered between Osaki Hana and Magari Saki, about 0.5 mile SSW. The bay affords anchorage, in 12.3 to 27.4m. This anchorage is specially suited to vessels waiting for the tide in the N narrows or seeking temporary shelter.

A breakwater, on which there is a light, is situated in the NW part of Kawachi Wan.

On the S part of Hirado Seto, Hoki Ura and Kigatsu Ura, 1 mile to the S, are two bays on the W side. Kantori Hana, 118m high, separates the two bays. Two islets, No Shima and Kuro Shima, lie close S and E, respectively, from Kantori Hana. Small vessels with local knowledge can obtain anchorage, in depths of 7.8 to 10.1m, mud, near the head of Kigatsu Ura.

**Emukae Wan** (33°18'N., 129°36'E.) lies on the mainland about 3 miles E of Hoki Wan. The bay affords anchorage to vessels with local knowledge, in depths from 10.1 to 18.3m, mud, and good holding ground. The anchorage is sheltered from all winds except those from the W.

Between Emukae Wan and Taka Shima, about 8 miles to the S, the E shore of Hirado Seto is fringed with a large number of islets, off and between which are numerous dangerous rocky patches. The whole area should be avoided while navigating the strait.

Between Kigatsu Ura and Shijiki Saki, about 10 miles to the SW, the W shore of Hirado Seto is fairly free of dangers. There are a number of small coves, but none are suitable as anchorages.

**5.26 Otona Se** (33°13'N., 129°31'E.), a rock, awash, lies about 3 miles SSE of Kigatsu Ura in the middle of Hirado Seto. A lighted buoy marks the N end of Otona Se. Kami Kareki Shima, an islet, lies about 0.5 mile S of Otona Se. Shimo Kareki Shima, a larger islet, lies 0.5 mile SSW of Kami Kareki Shima. Both islets are fringed by shoals and rocks. Passage between the two islets should be avoided. A light is shown from the S end of Shimo Kareki Shima.

**Kome Se** (33°11'N., 129°29'E.) lies about 1.3 miles SW of the light on Shimo Kareki Shima and has a depth of less than



0.3m. Kome Se is marked by a lighted buoy moored close S. A 10.6m rocky shoal lies about 0.3 mile WSW of Kome Se; depths of as little as 7.5m extend 0.5 mile NE of Kome Se.

**Hoageno Se** (33°07'N., 129°25'E.), a detached rock, which from a distance resembles a boat under sail, is 25.9m high and lies about 3.5 miles SE of Shijiki Zake. It is steep-to, except on its NW and SW sides, where a shoal bank extends out from the rock for about 0.1 mile.

Kuro Shima lies about 2.3 miles SW of the S end of Taka Shima. Mezeno Hana is a prominent bluff that is connected with the W end of the island. I Shima lies 2 miles NNE of Mezeno Hana. A number of rocks and shoals lie between the two places. Konoko-jima lies about 0.5 mile E of I Shima, with shoal water between the two islets. A light is shown from the NW side of Kuro Shima.

Ogami Shima, Taka Shima, Nakano Shima, and Kashiraga Shima are a chain of islets lying close offshore from the SW coast of Hirado Shima. At times, heavy rip tides are formed in the vicinity of the islets. A light is shown from Ogami Shima.

**Shijiki Wan** (33°12'N., 129°23'E.) is entered between Meshika Saki and Aiba Saki, and lies 1 mile SE of Kashiraga Shima. The bay affords good shelter, except from winds between the WNW and NW; in winter the bay is unsuitable as an anchorage. Vessels with local knowledge can obtain fairly good anchorage, in a depth of 7.3m, sand, at the head of the bay.

Shimo-Ajika-jima and Kami-Ajika-jima are two prominent, rocky islets lying off the approach to Shijiki Wan. A rock, 22.9m high, lies close off the W side of Shimo-Ajika-jima. There are no known dangers more than 0.1 mile off either islet.

**5.27 Hayafuku Se** (33°14'N., 129°23'E.), a group of above-water and sunken rocks, the highest above-water rocks being 2.4m high, lies on a shoal about 1.8 miles ESE of Shimo-Ajika-jima.

Tateba-jima, a comparatively steep-to islet, 67m high, lies about 4.5 miles NE of Kami-Ajika-jima. Betto Se, in the approach to Neshiko Wan, is a steep-to rock, with a depth of 8.5m, and lies about 1 mile NW of Tateba-jima.

**Neshiko Wan** (33°18'N., 129°26'E.) lies about 1 mile ENE from Tateba-jima, and is exposed to the W, but with offshore winds it affords anchorage, in depths of 9.2 to 18.3m.

Along the NW side of Hirado Shima lies Yobu Saki, located about 3.3 miles NE of Betto Se. The point is dominated by Yasuman Dake, a densely-wooded hill with a black appearance.

**Tatsuno Seto** (Ikitsuki Seto) (33°21'N., 129°26'E.) is frequently used in preference to Hirado Seto. Yobu Saki, on the E side of the channel, is comparatively steep-to, but the shoal water extending from Shiomi Saki, on the W side of the channel, reduces the navigable width of the channel to about 0.3 mile. A bridge, with a vertical clearance of 29m, crosses the narrowest part of Ikitsuki Seto.

Juga Zone, with a depth of 9.2m, rocks, lies 0.5 mile offshore, about 2 miles ENE of Yobu Saki. Zuda Sone, with a depth of 11.6, lies about 0.3 mile NE of Juga Zone.

**Hira Se** (33°22'N., 129°30'E.), 1m high, is the outermost of a chain of rocks that extends about 0.3 mile NW from the coast to a position about 0.5 mile SW of Kaise Saki. A submarine water pipeline extends 0.8 mile W from the coast, about 7.5

miles SSW of Kaise Saki. Bishago Iwa, 9.8m high, lies in the SW part of this chain.

Usuka Wan is entered between Nagasaki Hana and Kaise Sake, about 0.5 mile NE of Hira Se. A lighted buoy marks a dangerous rock 0.6 mile SE of Nagasaki Hana. Another lighted buoy is moored close SW of a 4.5m patch, 0.25 mile E of the above. Ebukuro Wan (Furue Wan), the S branch of the bay, is entered between a point about 0.5 mile ESE of Kaise Sake and Sakiyama Saki, about 0.3 mile farther ENE. Usuka Wan affords shelter to small vessels with local knowledge near its head. The bay has a number of shoals, rocks, and patches of foul ground that can best be seen on the charts. Ebukuro Wan affords good anchorage, in depths of 18.3 to 27.4m, good holding ground, and free of off-lying dangers.

**5.28 Tsuba Saki** (33°24'N., 129°33'E.), the N point of Hirado Shima, lies about 1.5 miles NNE of Usuka Wan. The point is backed by Shira Take, a hill with two summits; the higher is 259m.

**Aspect.**—Ikitsuki Shima is a hilly island with Shiomi Saki, its SE extremity, about 0.3 mile NW of Yobu Saki, and between these two points is Tatsuno Seto. Ban Take, the summit of the island, lies near its center and is 288m high, steep-to, and prominent. Lights are shown from Shiomi Sake on the SE coast, Ichibi Ura breakwater on the E coast, and from Otaka on the N end of the island.

**Nakaeno Shima** (33°22'N., 129°28'E.) is a rocky islet, 35m high, lying about 1.8 miles NE of Yobu Saki. Hira Se, 5.8m high, lies 0.25 mile N of the islet's NW point; midway between this rock and the point is Kui Se, a rock that dries 1.2m.

Taku Shima lies with Sakiseno Hana, its E extremity, about 2 miles NNW of Tsuba Saki. The island is hilly, with a few scattered trees on its slopes. The NE and NW sides of the island are comparatively free of off-lying dangers, but from the E to SE, it is mostly foul. Yoko Shima lies about 0.8 mile off the SE side of the islet. A light is shown from the S end of Yoko Shima.

**O Shima** (33°29'N., 129°33'E.) is mostly a cliffy island and lies about 1.5 miles to the N of Taku Shima. A submarine cable is laid from O Shima to the NE coast of Taku Shima. The highest hill, Hirano Tsuji, rises to a height of 216m, and is located near the NW coast of O Shima. O Shima is generally free of offshore dangers, except for a rock, Kai Se, lying about 0.5 mile off the NW coast, and Tako Se, with a depth of 4.9m, lying about 0.5 mile off Tsurunosagari Hana Light, on the SE side of the island. Lights are also shown from Umanokashira Saki, Nagasaki Hana, and Magari Saki.

Gono Ura, on the NE side of the island, affords sheltered anchorage in moderate depths to vessels with local knowledge, except during N winds. Azuchi Ura, on the SW side of the island, also affords shelter to small vessels.

## Amoura Wan to Sasebo Wan

**5.29 Amoura Wan** (Aiura Wan) (33°10'N., 129°38'E.) is entered between Tatseishi Saki, about 2.8 miles NE of Ushigakubi Saki, and O Saki, about 1.3 miles SSE. The approach to the harbor is marked by lighted buoys. The harbor stands on the E side of the head of the bay with six berths for vessels of 100 to 2,000 grt and with depths of 3.1 to 7.5m. There is sheltered anchorage, in a depth of 10.1m, in the middle of the bay.



### Sasebo

No pilots are available. A charted submarine water pipeline is laid W from Amoura Ko to Taka Shima.

Kujukushima Wan lies about 1 mile SE of Amoura Wan. The narrow channels in the bay are marked by beacons, but only vessels with local knowledge should enter Kujukushima Wan. A submarine cable from Okinawa lands in the N part of Kujukushima Wan, 0.6 mile E of O Saki. Uki Se, 13.7m high, lies on a shoal marked by a beacon, and stands 1.25 miles W of the entrance to Kujukushima Wan.

**Nakano-Kajikaki** (33°07'N., 129°39'E.), with a depth of less than 1.8m, lies about 2.3 miles S of the entrance to Kujukushima Wan, and about 0.1 mile to the SW of it lies Okino-kajikaki, with a depth of 4m. A buoy is moored off the W side of these dangers.

**Kogo Saki** (33°06'N., 129°40'E.) is the W entrance point to Sasebo Wan, and lies about 0.8 mile SSE of Nakano-Kajikaki. A light is shown from the point and buoys mark the shoal area, close off the point. The harbor entrance control post and signal station stands on Kogo Saki.

Shira Se is a group of above-water and sunken rocks lying about 2 miles WSW of Kogo Saki. A light is shown from the N rock of the group.

**Nakano Se** (33°05'N., 129°39'E.), a detached rock with a depth of 2.1m, lies at the SE end of a rocky patch which lies 0.6 mile SE of Shira Se. A buoy marks the SE end of Nakano Se.

Araidashino Se, with a depth of 12.8m, lies in the fairway entrance to Sasebo Wan, about 0.4 mile SSW of Kogo Saki. A buoy marks the W side of Araidashino Se.

### Sasebo (33°10'N., 129°43'E.)

[World Port Index No. 62380](#)

**5.30** The Port of Sasebo is a large, nearly landlocked, deep water harbor, entered between Kogo Saki and Yorifune Bana, about 0.5 mile to the ESE. The harbor affords anchoring and berthing facilities for vessels of almost any size. Anchorages comprise 11 mooring buoys for commercial shipping and 109 buoys used by the U.S. Navy.

### Winds—Weather

Northerly winds prevail throughout the year; however, S winds occur during the summer. High and low temperatures

occur in August and January. Precipitation is high during June and July, with over 350mm recorded in the latter month. Fog seldom occurs in Sasebo Wan, but light snow may fall during winter months.

Weather signals, by given by light, are shown continuously from the radio tower of the Maritime Safety Office on the E side of the head of the harbor.

Vessels equipped with radiotelephones will guard voice radio circuit 2716 kHz continuously when winds of more than 30 knots are experienced.

## Tides—Currents

The MHW interval at Sasebo Wan is 8 hours 21 minutes; spring tides rise 2.9m and neap tides rise 2m.

The flood tidal current off **Io Saki** (33°07'N., 129°43'E.) sets toward the head of the harbor, and the ebb tidal current sets toward the entrance; the flow begins from 1 to 2 hours after HW or LW, and the rate does not exceed 0.5 knots. Off Kuchiki Saki, a SE current flows from 2 to 3 hours after LW, to 2 to 3 hours after HW, and a NW current flows from 2 to 3 hours after HW, to 2 to 3 hours after LW. The rate of the SE current seldom exceeds 0.5 knot, but the NW current sometimes attains a rate of more than 1 knot.

## Depths—Limitations

The largest vessel afloat can be accommodated at anchor. The largest vessel that can be berthed alongside is one with a draft of 11m. Vessels with drafts up to 11.9m can be accommodated at the mooring buoys and dolphin berths. The length of a vessel is not a controlling factor at most moorings; however, the largest vessel accommodated had an loa of 341m.

The following berths are available:

Wharf		Length (each)	Min. depth	Max. draft
Tategami Pier	1	254m	10.6m	10m
	2-3	182m	10.6m	10m
	4-6	192m	10.6m	10m
	7-8	182m	10.6m	10m
	9	152m	10.6m	10m
Motofune	1	80m	12.9m	9.75m
	2	80m	9.2m	8.53m
Akazaki	1-2	149m	12m	11.58m
	3	219m	12m	11.58m
Maebata Pier	1	185m	10m	10m
	2	195m	11m	11m
Uragashira		260m	7.5m	7.5m
Yokose		88m	13.7m	12.8m
Iorizaki		81m	14.5m	9.75m
Hizukushi		103m	4.6m	—

Wharf	Length (each)	Min. depth	Max. draft
Ekiura	150m	4.9m	—

## Aspect

Kompira Yama, a 101m summit above Yorifune Bana, the S entrance point of Sasebo Wan, is conspicuous from a W approach. Shokan Dake, a mountain peak, 443m high, lies 1.75 miles N of the city. Kokuzo Yama, a conspicuous peak, 307m high, lies about 3 miles SSE of Kompira Yama.

Navigation aids mark the fairway from the entrance and the channel leading to the port. Most shoals and dangers are marked by beacons and lighted buoys.

## Pilotage

Pilotage is compulsory for vessels over 300 grt. Vessels should notify the pilot station of their ETA at least 24 hours prior to arrival and of any subsequent change. The pilots board vessels 2 miles WNW of Koga Saki Lighthouse. The pilot boat flies the International Code flag H. It has been reported pilots will only board during daylight hours, except during an emergency. Entry and departure for all vessels, except U.S. Naval vessels, is from sunrise to sunset, except during an emergency. During stormy weather, there are occasions when permission is granted through the Kogo Saki Signal Station to proceed into the harbor without a pilot.

## Regulations

In addition to the regulations governing all Japanese ports, the following are excerpts from those applying particularly to Sasebo Wan:

- Vessels must not exceed a speed of 10 knots in the vicinity of Sasebo Wan, within a line of bearing joining Bansho Wan, about 0.5 miles S of Kogo Saki, with Shira Se Light and Hichiro Bana, a rounded point lying 1.75 miles NNW of Kogo Saki.
- Vessels are to await instructions from the harbormaster outside Kogo Saki, clear of the fairway. Kogo Saki Signal Station acknowledges a vessel's distinguishing signal in the International Code.
- Vessels of 500 grt or more will use two anchors when anchoring in Area No. 1 of the harbor.

## Signals

The harbor control post and signal station are situated on Kogo Saki. Vessels entering Sasebo Wan must request permission by flashing light or flag hoist. The signal station will relay the instructions of the harbormaster as to anchoring, berthing, and movements of vessels in and out of port. Vessels should retain onboard the most recent edition of Japan Maritime Safety Laws and Regulations, obtainable through the Japanese Coast Guard. This publication should be kept as a reference for signal station communiques and their meanings,



appropriate answering signals, and other local or specific regulations.

The following traffic control signals are shown from the signal station on Kogo Saki, as follows:

1. A white flashing light every 2 seconds—
  - Inbound traffic permitted.
  - Outbound traffic of less than 500 grt permitted.
  - Outbound traffic of more than 500 grt must wait, clear of the fairway.
2. A red flashing light every 2 seconds—
  - Outbound traffic permitted.
  - Inbound traffic of less than 500 grt permitted.
  - Inbound traffic of more than 500 grt must wait, clear of the fairway.
3. A white flashing light, alternating with a red flashing light, every 3 seconds—
  - Inbound and outbound traffic of less than 500 grt permitted.
  - Inbound and outbound traffic of over 500 grt must wait, clear of the fairway.
4. Three red flashing lights, alternating with three white flashing lights, every 6 seconds—
  - Only ships directed by the harbor master may enter or leave the harbor.
  - All other vessels must wait, clear of the fairway.

Berthing signals, consisting of the Designation flag and alphabetical flags of the International Code of Signals are displayed at Kogo Saki Signal Station, as follows:

Signal	Meaning
E	Anchor W of Kuchiki Saki.
F	Anchor in Ebisu Wan.
G	Anchor near Taka Shima.
H	Wait near Kogo Saki or anchor 3 miles off Kogo Saki to wait for a berthing signal or orders.
Q	Anchor in Quarantine Anchorage.

The ship's reply is the Answering Pennant above the alphabetical flag for the berth.

## Anchorage

The outer harbor is the principal anchorage. It affords protected anchorage in 9.2 to 50m, mud and shells, good holding ground. The inner harbor affords safe anchorage for large vessels. There are depths of 51m at the harbor entrance, 22.9 to 54m in the passage, 10 to 37m in the anchorage, and 11m at the berthing spaces. Apart from anchorage areas controlled by the U.S. Navy, there is anchorage for four 10,000 grt commercial ships in Section No. 3, in a depth of 10.1m. A large number of vessels can be berthed at anchor, and at fixed or free swinging moorings.

Ebisu Wan affords good anchorage, in 10.1m, mud and shells. Akuno Ura and Ushino Ura afford anchorage to small vessels.

The anchorage is situated on the S side of Sasebo Wan, close E of Yorifune Saki. Inbound vessels, subject to quarantine, will

remain in the anchorage and are forbidden to disembark passengers or crew or to load or discharge cargo. Vessels will shift to the general anchorage immediately after pratique is granted. Only vessels seeking quarantine shall use this anchorage.

An anchorage for carrying explosives is situated about 0.8 mile SSE of Iori Saki, and a mooring buoy for their use is situated 1.1 miles E of the point.

A prohibited anchorage and restricted area, where vessels with a draft of 6m or more may not navigate, lies within a radius of 250m of a dangerous wreck which lies 1.5 miles E of Yorifune Saki on the S side of the fairway. The wreck is marked on its E side by a buoy.

## Directions

It is recommended that large vessels pass to the S of Aradshino Se on entering Sasebo Wan and to the N of Aradshino Se on their exit.

## Caution

It has been reported that when rounding Iorizaki Wharf and proceeding to anchorage, extreme caution needs to be taken because numerous ferry boats transit the area.

## Omura Wan and Approaches

**5.31** Omura Wan, a landlocked gulf, lies SE of Sasebo Wan and can only be entered through that port.

Hario Seto and Haiki Seto, SW and NE, respectively of Hario Shima, are the channels leading to Omura Wan, but the latter is only a small craft channel. Hario Seto is deep, but is tortuous and barely more than 0.1 mile wide; the tidal currents in it are strong and it should only be used by moderate size vessels with local knowledge.

An overhead cable, with a vertical clearance of 20.1m and a bridge, with a vertical clearance of 21.3m, cross Hario Seto near its S end.

Omura Wan affords anchorage, in 12.8 to 20.1m, mud, over the greater part of its length and breadth.

## Kogo Saki to Kabuto Shima

**5.32 Omodaka Ko** (33°04'N., 129°40'E.) is entered between Bansho Hana and Matsuyama Saki, and lies about 1.5 miles S of Kogo Saki. The inlet affords anchorage to small vessels, in depths of 7.3 to 20.1m, mud and good holding ground, but local knowledge is essential. The town of Omodaka lies on the N side of the head of the inlet.

Kuroguchi Ura, close S of Omodaka Ko, affords temporary anchorage to small vessels, in depths from 7.3 to 20.1m, mud, but the shelter afforded is inferior to that of Omodaka Ko.

Yobukono Seto (Terashima Suido), a strait about 3.5 miles long and about 0.4 mile wide, is entered between Matsuyama Saki and Kiano Se on its N end. The S end of the strait is entered between Kabuto Shima and Nanatsugama Ko. A depth of 14.6m can be carried through Yobukono Seto. In its narrowest part the fairway is about 0.1 mile wide. A bridge is under construction across the strait.

**Kurose Wan** (33°03'N., 129°38'E.) lies on the W side of Yobukono Seto, about 1.5 miles SW of Kuroguchi Ura. The small coaling harbor of Magome Ko lies in the SW part of Kurose Wan. Two small piers in Magome Ko have depths of 6.1 and 7m alongside, respectively; they can accommodate vessels of about 2,000 grt. Buoys and beacons mark the fairway and dangers to the harbor.

Otawa Wan lies about the middle of the E side of Yobukono Seto, 1 mile ESE of Kurose Wan. The bay affords good anchorage, in depths from 8.2 to 17.4m.

**5.33 Tera Shima** (33°02'N., 129°38'E.), on the W side of Yobukono Seto, lies close off the E side of O Shima, and a narrow channel between them is obstructed by reefs; it is spanned by two overhead cables, with a minimum vertical clearance of 10m. A bridge, with a vertical clearance of 14m, spans the channel close S of the S cable. A lighted beacon is shown at the NE end of the reef.

Kabuto Shima, a prominent round-topped rock, 14.6m high, lies about 0.8 mile S of the S end of Tera Shima. A shoal bank extends 0.1 mile E and 0.15 mile N of the rock. A light is shown from Kabuto Shima.

**O Shima** (33°02'N., 129°37'E.) lies close W of Tera Shima and is separated by a narrow channel, used only by small craft with local knowledge. Sunken rocks fringe both the N and S coasts of the island and should be given a wide berth. The E coast is indented and on this side lies Tokuman Wan and Kurose Wan, on its S and N parts, respectively. On the W side of the island is Oshima Ura. Uri Dake, almost in the middle of the island, attains a height of 194m and is prominent.

Kakinoura Shima lies close SW of O Shima and is connected by a causeway. The island is fringed by foul ground and indented with a number of small coves and inlets. The town of Sakito stands in the middle of the island.

**5.34 Sakito Ko** (33°01'N., 129°34'E.) ([World Port Index No. 62370](#)) is a local port on the W coast of Kakinoura Shima, about 7 miles SW of Sasebo Ko. Sakito Ko was developed as a coal shipping port, but the Sakito coal mine has since been closed down. Vessels of about 2,000 grt now call at the port's cement and salt factories. The inner harbor splits into three branch bays; these are called, from the W, Kaki-no-Ura, Fuku Ura, and Mizu-no-Ura.

This port has five berths and three pontoons for coal cargo. The five berths have a total length of 728m, with depths alongside of 6 to 8.2m. The three pontoon berths have a total length of 73m for lighters and barges drawing up to 4.3m. Berth 2, Berth 3, and Berth 4 are equipped with conveyors.

**Aspect.**—The National Hostel, which is near the mountain summit in the W part of Sakito Shima, which also has a large white painted chimney, and three black painted tanks which are on the summit of the mountain, are all good landmarks.

**Pilotage.**—Pilotage is available. Call "SAKITO-HO-AN" on VHF channels 12 and 16.

**Anchorage.**—Anchorage can be obtained in the outer harbor, in about 18.3m, SW of Mutashima and N of the fairway indicated by the Hukuura Range Lights. A better position is in about 25.6m, sand, close N of the fairway indicated by the Hakuura Range Lights and E of a line of bearings between Mitokono Hana and Tsuru Saki. Caution is needed in the latter

position because of strong S ebb tidal currents. In the autumn, it would probably be advantageous to anchor farther E.

Anchorage, sheltered from the strong NW winds in winter, can be obtained, in about 32.9m, E of Imo Shima and S of the above mentioned 88.1m chimney. Imo Shima is a group of rocky islets, the highest of which is 9.8m high, that lie on foul ground within a 0.5 mile S of the SW extremity of Kakinoura Shima.

**5.35 Sakito Shima** (33°00'N., 129°33'E.), 76m high, with Mitoko Shima, 48m high, W of it, lies on a shoal that extends about 1.3 miles WNW from the SW end of Kakinoura Shima. Close to the SW end of Sakito Shima stand three radio towers and a light is shown from the W side of Mitoko Shima.

Kata Shima, about 1.5 miles off the middle of the NW coast of O Shima, is 99m high, and has a steep cliff on its S side, about 0.1 mile from the foot of which is a rock, 2.1m high. Sunken rocks lie within 0.1 mile of the SE and NE sides of the islet.

**Kanise Shosho** (33°05'N., 129°36'E.) are extensive reefs lying NE of Kata Shima. The reefs lie within 1.5 miles of the NW extremity of O Shima. Kanise Shosho is marked by buoys on its E and S sides.

## Coastal Features

**5.36 Nanatsugama Ura** (33°00'N., 129°39'E.) lies about 0.3 mile E of the S entrance to Yobukono Seto. The inlet is entered between Egawano Hana and Nagushi Sake, the N extremity of a narrow island forming the W side of the inlet, about 0.5 mile to the S. Small vessels, with local knowledge, can obtain excellent sheltered anchorage, in depths of 5.5 to 14.6m, in the N part of Nanatsugama Ura. A submarine cable is landed on the E shore of the inlet near the entrance.

Ko-jima, an islet 22.9m high, lies about 1 mile S of the entrance to Nanatsugama Ura. Ono Hana rises steeply to Taka-bo Yama, a prominent 232m conical hill, 0.75 mile SSW of Ko-jima. Futatsu-Ko-Shima and Bakuwae Shima, both 12.8m high, lie about 1.3 miles S of Ono Hana.

**Kurokama Saki** (32°57'N., 129°38'E.) lies 0.75 mile S of Bakuwae Shima. The point forms the NE side of Matsushima Suido.

Matsushima Suido lies between the island of Matsu Shima, on the W side and Fuku Shima, Yaki Shima, and the mainland, on the E side. The strait is narrow and tortuous and not recommended; however, vessels finding it necessary to pass through the straits should refer to the courses and ranges indicated on the chart. It has been reported the largest vessel to transit the straits was about 800 grt.

An overhead cable, with a vertical clearance of about 38m, spans Matsushima Suido between the E extremity of Matsu Shima and the W shore of Fuku Shima.

**5.37 Matsu Shima** (32°56'N., 129°37'E.) is flat-topped, well-cultivated, and rises to Tomi Yama, 218m high, in the center of the island. Its S and W coasts are mostly gravel; its several points are fringed by reefs, and within 0.2 mile of its W and S sides are rocks with depths of less than 9.2m. Matsushimano Se, a 2.1m patch, lies close WNW of Matsu Shima.

Matsushima Ko is a coal exporting harbor on the N shore of Matsu Shima. The harbor entrance is protected on its NW side

by an angled breakwater extending 0.4 mile NE from the N extremity of Kushi Shima; a lighted tower stands at its head.

A jetty for the import of coal to the power station is situated S of the angled breakwater. Vessels of up to 60,000 dwt and with a draft of 14m may berth. The unloading rate is 1,600 tons per hour.

**Pilotage.**—Pilotage and the use of tugs are compulsory. The pilot boards from a tug about 2 miles NNW of the entrance. For vessels of 60,000 tons, three tugs are required; for smaller vessels, two tugs are required.

A signal station is situated about 0.2 mile S of the root of the angled breakwater. There is a mooring buoy in the harbor, about 90m E of the pier head.

**Fuku Shima** (32°55'N., 129°38'E.) lies on the E side of Matsushima Suido. Yaki Shima lies close off the N end of Fuku Shima; Kashira Shima lies 0.25 mile off the island's S extremity. A light is shown from Kashira Shima. The three islands are all fringed with foul ground and rocks.

Ike Shima, about 2 miles S of Matsu Shima, is a flat-topped island with two high hills on its W side. The N hill is 123m high and forms the summit of the island. A saltwater lagoon lies on the NE side of the island. Four buoys are moored off the lagoon and lead to a small harbor, protected by breakwaters.

**Ohiki Shima** (32°52'N., 129°34'E.), about 1.3 miles SW of Iki Shima, is 76.5m high, and thickly wooded. About 0.5 mile NE of the islet lies Aino Se, a detached reef with a depth of less than 1.8m over its N end. The channel between Iki Shima and Ohiki Shima is not recommended. O Se, on which are a number of above-water rocks and which is surrounded by sunken rocks, is a ledge that dries and lies within 1 mile NW of the W end of Ohiki Shima. A light is shown from O Se.

Hako Shima, about 1.5 miles SE of Iki Shima, is 52m high, and on its SW side, and separated from it by shoal water, is Ozumo Iwa, a steep, pointed rock, 79m high.

**5.38 Kozumo Iwa** (32°51'N., 129°40'E.), a square rock, 50.5m high, lies about 1.5 miles ESE of Hako Shima.

Konoura Ura, a small bay on the mainland, lies about 2.5 miles ENE of Hako Shima. A long narrow shoal, with depths from 7.3 to 9.2m, lies in the center of the bay. The village of Konoura stands at the head of the bay and is protected by a breakwater.

**Shiro Hana** (32°50'N., 129°42'E.) is a somewhat salient point that lies 3 miles SSE of Konoura. Hashira Sone, a steep-to detached rock, with a depth of 2.1m, lies about 0.8 mile SE of Shiro Hana.

No Se, a rock 0.6m high, lies about 2.3 miles SE of Shiro Hana. A light is shown from the rock. Mie Ura is entered between No Se and Kagura Shima, 1.5 miles to the SE. The bay has a number of shoals and reefs, therefore, it should not be entered without local knowledge.

**Shikimi Ko** (32°47'N., 129°46'E.), a small fishing harbor protected by a breakwater, lies about 1.5 miles ESE of Kagura Shima. A light is shown from the head of the breakwater. A submarine cable is landed 1 mile SE of Shikimi light.

Fukuda Saki (Hukuda Saki), on the N side of the main approach to Nagasaki Ko, is located about 2.5 miles SSE of Shikimi Ko, and is a precipitous headland faced with a remarkable white cliff.

Fukuda Ura (Hukuda Ura), about 1 mile E of Fukuda Saki, affords good temporary anchorage, in 9.2 to 20.1m, mud, with

protection from N and E winds. A pier at the head of the bay has depths of 5.5m alongside its head.

## Approaches to Nagasaki Ko

**5.39** On the N side of the approach to Nagasaki Ko is Matsu Shima, a small islet, 25.9m high, which lies about 1.3 miles S of Fukuda Saki. Nakano Shima, 17.1m high, lies about 0.4 mile SE of Matsu Shima, and Shiroga Shima, lies 0.25 mile ESE of Nakano Shima, and is connected to the mainland by a stone embankment.

Kajikake, a reef that dries 0.6m, lies almost 0.5 mile ESE of Shiroga Shima. A lighted buoy is moored about 90m S of Kajikake. Takaboko Shima, 82m high and prominent, lies about 0.4 mile E of Kajikake. Hando Se lies on a small shoal, midway between Takaboko Shima and KoSaki Hana, the N entrance point to Nagasaki Ko. A buoy is moored close S of Hando Se.

Io Shima, Okino Shima, and Koyagi Kagenoo Shima lie, in that order from the W to E, on the S side of the main approach to Nagasaki Ko. A light is shown from the N end of Io Shima. Okino Shima and Io Shima are connected by two bridges. A light is shown from the SE end of Okino Shima.

Onaka Seto separates Okino Shima from Koyagi Shima. An overhead cable, with a vertical clearance of 35m, crosses the strait between the two islands. A light is shown from Naginata Saki, the N extremity of Koyagi Kagenoo Shima.

## Nagasaki Ko (32°43'N., 129°51'E.)

World Port Index No. 62360

**5.40** Nagasaki Ko, which is a principal port, is entered between KoSaki Hana and Megami Hana, about 730m to the ENE. The harbor is large and well-sheltered by mountains; it is comprised of the inner and outer harbors, with berthing and mooring facilities for vessels of almost any size.

## Winds—Weather

With the exception of winds from the S, the harbor is protected from all other winds. The weather does not generally interfere with cargo operations, except during the rainy season.

## Tides—Currents

The MHW interval of Nagasaki Ko is 7 hours 54 minutes; spring tides rise 2.7m and neap tides rise 2.1m.

The height of the water level is affected to a marked degree by seiches, which sometimes cause a variation of as much as 0.9m. A variation of about 2.7m in 20 minutes has been recorded. These phenomena usually occur from late autumn to early spring, but seldom in summer. The most pronounced of these oscillations usually occur when there are two localized areas of low pressure in the vicinity. The periods vary from about 10 to 40 minutes. Prior notifications is not possible at present.

The tidal currents in the entrance and within Nagasaki Ko set inward on the flood and outward on the ebb, turning at the times of HW and LW; the rate does not exceed 0.5 knot.





Nagasaki Ko—Inner part from NE

## Depths—Limitations

The largest wharf in the harbor is Dejima Wharf. It is 420m long and suitable for vessels of up to 30,000 tons and a draft of less than 9m.

Motofuna Pier, with a lighted tower at its head, extends nearly 0.2 mile W from the shore at the N end of Dejima Wharf. There are berths on the W and S sides of this pier with depths of 6.1 to 6.6m alongside.

Matsugae Wharf, situated on the E side of the area about 0.7 mile NE of Tomi Hana, is 270m long and has a depth of 12m alongside. It is used by passenger vessels.

The oil terminal is capable of accommodating vessels of up to 50,000 dwt, with 11.9m alongside. A number of mooring buoy berths can moor large vessels with deep drafts.

The maximum permissible size of a vessel entering the harbor is 366m long, 36.6m breadth, and a draft of 15m.

## Aspect

At times, the islands in the approach to Nagasaki Ko do not show up against the background of the mainland and the position of the harbor is not easily made out, but on near approach no difficulty should be experienced.

**Hachiro Take** (32°40'N., 129°51'E.) is the highest peak on Nagasaki Hanto.

Iwasimi Take, a thickly-wooded hill, rises 167m about 0.3 mile N of KoSaki Bana, the W entrance point of the inner harbor. The hill is conspicuous from a distance.

The flagstaff of a signal station on the E side of the entrance to the inner harbor is marked by a light at night, and forms a good mark for vessels entering or leaving the harbor.

A vessel reported that a chimney near the S end of **Futago Shima** (32°39'N., 129°45'E.) is a good landmark when approaching Nagasaki Ko from the SW.

## Pilotage

Pilotage is not compulsory, but necessary, unless the master is well acquainted with the locality. The pilot embarks about 1 mile NE of Io Shima Ma Hana Light; the pilot boards large vessels about 1.5 miles NW from the same light.

The pilot is available at any time, subject to adequate notice; VHF radio contact is not available. All communications with the pilot should be made through agents.

The pilot boat carries International signals. The International Code flag G flag, in daytime and Morse signals, at night, are used to call the pilot.

When sea conditions are unfavorable, mainly during strong N or W winds, the pilot boards in the vicinity of Matsu Shima.

## Regulations

Vessels carrying ammunition are not allowed to enter the port.

In addition, full precautions are required to prevent fires within the harbor due to the presence of a large number of petroleum tanks in the Second District and the Third District.

## Signals

The arrival of vessels is reported by telegraph to Nagasaki from the flagstaff close to the lighthouse on Shin Bana.

A signal station is situated on the E side of the entrance of the inner harbor in a position about 320m SSW of Megami Hana. Vessels should retain onboard the most recent edition of Japan Maritime Safety Laws and Regulations, obtainable through the Japanese Coast Guard. This publication should be kept as a reference for signal station communiques and their meanings, appropriate answering signals, and other local or specific regulations.

## Anchorage

Large vessels can obtain safe, sheltered anchorage during strong SW winds in the Third District and the Fourth District of the outer harbor.

Anchorage can be taken in almost any part of the inner harbor, as designated by the port authorities, in 6.4 to 27.4m, mud, good holding ground. Vessels of more than 500 grt are required to use two anchors. Vessels are prohibited to anchor in the fairways.

The quarantine anchorage lies in District Three, on the SE side of the fairway, S of KoSaki Hana.

## Directions

Vessels can approach Nagasaki Ko from the SW by keeping Io Shima Light bearing not less than 040° in order to clear dangers lying off the S side of Taka Shima. When W of Taka Shima, course should be shaped to round Shin Bana at a distance of about 1 mile to a position with Io Shima Light bearing 180° and a distance of 1 mile.

Approaching from the NW, from a position about 3 miles SW of Ohiki Shima, a vessel should steer for Io Shima in line with Hachiro Take, bearing about 119°.

**5.41** On the NW side of Nagasaki Hanto is Kayaki Wan, a small cove, which lies 2 miles SSE of Koyagi Shima. The cove affords anchorage to small vessels, in depths of 12.3 to 18.3m. The village of Kayaki lies at the head of the cove.

Yoko Shima, Kuro Shima, and No Shima are a group of islets, surrounded by reefs and rocks, lying to the W of Kayaki Wan. Otono Se, a reef with depths of less than 1.8m, lies about 0.5 mile SW of No Shima.

**Taka Shima** (32°40'N., 129°45'E.) lies about 2 miles W of Kuro Shima. Futago Shima, the S part of Taka Shima, is the site of a colliery, the high buildings of which are conspicuous from a distance. Two chimneys stand at the S end; from a quay on the E side, a pier with depths of 7 to 7.9m at its head, projects E. Two mooring buoys and a breakwater lie off the head of the pier. The pier is exposed to winds from between the E and S. A light is shown in position 32°39'15"N, 129°45'41"E.

The flood tidal current sets N at a maximum rate of 3 knots in the area. A large number of submarine cables are landed on the NE and S coasts of Taka Shima.

Nakano Shima lies about 1.5 miles S of Taka Shima, and is a grassy, uninhabited island, 45m high. The N and S end of the island is fringed by reefs extending out about 0.2 mile.

**5.42 Ha Shima** (32°37'N., 129°44'E.) ([World Port Index No. 62350](#)), about 0.5 mile SW of Nakano Shima, can be identified by the tall structures of a colliery. The island is completely encircled by an artificial embankment, on the E side of which is a pier and two mooring buoys. There are depths of 4.9 to 10.1m at the pier. A light is shown from Ha Shima.

Mitsu Se, 1.75 miles SW of Ha Shima, is a patch of foul ground and is the SW danger on the E side of the approach from the S to Nagasaki Ko. It consists of a group of above-water and sunken rocks. Nakano Sone, about 0.8 mile E of Mitsu Se, is a steep-to detached rock, with a depth of 6.7m. A light is shown from Mitsu Se.

Namokita Ura, a narrow inlet, is only available to small craft with local knowledge, and lies on the SW end of Nagasaki Hanto. The E entrance point is surmounted by a dense growth of trees and is prominent. Lights are shown from the entrance points to the inlet.

**Nomo Saki** (32°34'N., 129°45'E.) is the SW extremity of Nagasaki Hanto. It is rocky and fringed with reefs that dry, which in places, extend 0.25 mile offshore. Otategami is a rock lying on a reef about 0.2 mile S of Nomo Saki. A light is shown from the rock.

## Danjo Gunto and Goto Retto

**5.43 Dango Gunto** is a group of islands lying in the SW approach to Nagasaki Ko, between 72 and 80 miles WSW of Nomo Saki. It consists of two main islands and a number of islets and rocks, mainly of basal formation. The coasts of the islands are cliffy and landing places few. With the exception of the lighthouse keepers, the group is uninhabited, but during the fishing season, large numbers of fishing vessels frequent the vicinity.

**Me Shima** (31°59'N., 128°21'E.), the SW and highest island, is covered with stunted trees. There is a sharp peak, 283m high, near its N end; the S slope is wooded while the E slope is bare and cliffy. A light, at an elevation of 118m, is stand on the summit. A ramark is situated at the lighthouse. Same Se, above-water rocks, lie about 1.5 miles S of the lighthouse.

Hanaguri Shima lies about 1.3 miles NNE of Me Shima, and separated by Hanaguri Seto, with a navigable width of only 0.1 mile. The islet is steep-sided and 141m high. It is fringed with rocks extending about 90m offshore.

**Yori Shima** (32°01'N., 128°22'E.), about 0.8 mile NNE of Hanaguri Shima, has two sharp peaks on its E side. Several above-water rocks lie within 0.25 mile W and S of the SW extremity of the island.

Kuroki Shima, 104m high, is located about 0.5 mile NNE of Yori Shima. The islet is cliffy on all sides and is fringed with rocks. Nabe Seto, the channel between Kuroki Shima and Yori Shima, is foul and dangerous.

**5.44 O Shima** (32°03'N., 128°24'E.) lies about 0.3 mile NE of Kuroki Shima and is separated from it by Magome Seto. The coastline of the island is rocky and rises precipitously from the water's edge to plateaus, about 91m high. There are many detached rocks off the several headlands of the island, but none is at a greater distance than 0.35 mile offshore.

**Hatake Sone** (32°04'N., 128°26'E.), with a least depth of 0.9m, is a steep-to pinnacle rock that lies about 1.3 miles NE of

Nokogiri Saki, the NE extremity of O Shima. A 1.8m shoal lies about 0.3 mile SSW of this rock. Tide rips mark these dangers, except at SW. The channel between the rocks is deep, but not recommended because of the tidal currents.

**Tori Shima** (32°14'N., 128°06'E.) consists of three above-water rocks lying about 19 miles NW of O Shima. The largest and S of these rocks is 17.4m high and has the appearance of a pyramid when seen from the S, but from the N it appears as a sharp ridge.

## Goto Retto

**5.45** The Goto Retto consists of six principal islands; from S to N they are Fukue Shima, Hisaka Shima, Naru Shima, Wakamatsu Shima, Nakadori Shima, and Uku Shima, together with a number of small islands, islets, and rocks. There are six navigable channels through the islands, but the tidal currents in them are very strong, attaining at times a rate of 6.5 knots.

## Fukue Shima

**5.46** Fukue Shima, the largest in Goto Retto, is mountainous. Its coasts are considerably indented and the coastal hills are grassy, but the mountains in the interior are rugged; the valleys between are fertile.

**Ose Saki** (32°37'N., 128°36'E.) is the SW extremity of the island. The point is steep-to, rocky, and marked by a lighthouse.

Daiho Ura lies 3 miles ESE of Ose Saki and affords anchorage, sheltered from the N wind, in depths of 14.6 to 18.3m, sand and shells. A light is shown from the head of the breakwater extending NE from the shore at Daiho.

**Kurose Wan** (32°36'N., 128°44'E.) lies close E of Daiho Ura and affords anchorage, sheltered from N and E winds, to vessels with local knowledge. Futago Se is a rocky islet near the center of the bay. Tsutara-jima, a second islet, lies about 1 mile S of Futago Se. A light is shown from the head of the breakwater at Kurose.

Kasayama Saki, the S extremity of Fukue Shima, is located about 2.5 miles SE of Kurose. It is rocky and shelving, and from it cultivated land rises to an elevation of 68m. A light is shown from the point.

Kuro Shima, 98m high, lies 1.75 miles off the SE shore, about 3 miles NE of Kasayama Saki. It is steep and rocky on its SW and N sides.

**O Shima** (32°34'N., 128°54'E.), the largest, highest, and southernmost of the islands, lies about 3.5 miles SE of Kuro Shima. Its summit is located towards its E side and attains a height of 92m. A light is shown from its SE point.

O-Itabe-jima consists of two islets about 1 mile N of O Shima. Both are fringed with reefs and the channel between them and O Shima is foul.

**Aka Shima** (32°36'N., 128°55'E.), the NE island of the group, lies about 2 miles NNE of O Shima. It is 54m high and fringed with reefs. Hana Se, about 0.5 mile to the N, is a reef that dries in places.

**Tomie Wan** (32°38'N., 128°48'E.) lies about 2.5 miles NW of Kuro Shima and is entered between Nagasaki Bana and Kasura Bana. The entrance is about 2 miles wide, but its navigable width is considerably reduced by shoals on its S side.

**5.47** The port of **Tomie** (32°37'N., 128°46'E.) ([World Port Index No. 62390](#)) lies in the SW corner of the bay. A light is shown from the W end of a breakwater protecting the port.

Large vessels can anchor in Tomie Wan, in depths of 16.5 to 18.3m, sand, about midway between Kasura Bana and O-jira Se, with the latter in line with a rocky cape at the head of the bay, bearing 270°. Small vessels can anchor, in 11m, sand, with O-jira Se in line with Kasura Bana, bearing 090°, at a distance of about 1 mile from the former.

Submarine cables, including a power cable, are laid between Kuro Shima and the coast of Fukue Shima, to the W, and from O Shima and Aka Shima, an island 1.5 miles NE, to the coast of Fukue Shima NNW.

**Directions.**—Vessels approaching from the E should pass N of Kuro Shima, taking care to avoid Motsu Se and the reef extending N from Aka Shima. After reaching the position WSW of Karasu Sone, they should follow the directions for vessels approaching from the SW.

Sakiyama Hana, on the NE side of Fukue Shima, is the extremity of a rounded promontory, on which there is a group of grassy hills. A light is shown from a small cove close W of the point; a buoy marks Sembai Se.

**5.48 Fukue Ko** (32°42'N., 128°52'E.) ([World Port Index No. 62395](#)) lies about 3.5 miles NW of Sakiyama Hana. The port is protected by breakwaters; a light stands at the SE head of the N breakwater and another light near the N head of the S breakwater, which is detached. Another detached breakwater lies close E of the N end of the S breakwater.

A light is also shown from the head of another breakwater, 0.35 mile S of the N breakwater head. The port is used mainly by small craft. Vessels with local knowledge can obtain anchorage off Fukue, in depths of 14.6 to 16.5m, but caution is necessary because of submarine cables in the vicinity.

Fukuro Suido lies on the W side of Fukue Shima about 2 miles N of Ose Saki. The strait is obstructed by a reef and care must be taken not to mistake it for the entrance to Tamanoura Wan, which is 2.5 miles farther N. A light is shown from the NW entrance to Fukuro Suido.

**Tamanoura Wan** (32°41'N., 128°38'E.) affords excellent shelter, but the depths in most parts are considerable. Anchorage, sheltered from the NE and E winds, can be obtained, in depths of less than 18.3m, sand and shells, just outside the entrance to Arakawa Wan, on a spit that extends NE from Ko Shima to the mainland; the holding ground is not good and the position is exposed to the NW.

The best anchorage is 0.2 to 0.3 mile off the head of Tamanoura Wan, S of the entrance of Nakasu Ura, in about 20.1m, mud, though the position is somewhat exposed to SE winds which blow across the low land between the head of the bay and Daiho Ura.

Vessels of moderate size can obtain sheltered anchorage, in 11 to 12.8m, mud, in Nakasu Ura, but local knowledge is essential. The harbor is protected by a breakwater which has a light shown from the head of the breakwater.

**5.49 Sagano Shima** (32°44'N., 128°36'E.) appears as two islets from a W direction. Vessels with local knowledge can

obtain anchorage, sheltered from W winds, in about 15.5m, in a bay on the E side of Sagano Shima. Caution is necessary because of submarine cables.

Hime Shima lies about 1.5 miles NNE of Kashiwa Saki, the NW extremity of Fukue Shima. The NW side of the island consists of overhanging cliffs, but the rest of the island is wooded or cultivated. A light is shown from Kashiwa Saki.

Nishi Sone, with a depth of 11m, rock, lies 3.5 miles NW of Hime Shima. Kami Sone, a reef with two heads, lies about 2 miles E of Nishi Sone, and Shin Sone, with a depth of 7.3m, lies 0.5 mile N of Kami Sone.

**Hamanokuri Wan** (32°45'N., 128°42'E.) is entered about 2.5 miles SE of Kashiwa Saki. The bay affords safe anchorage, except from winds between the N and E, in a depth of 11m, good holding ground. The village of Hamanokuri lies on the NW side of the bay and is protected by two breakwaters. A light is shown from the head of the N breakwater.

Mizuno Ura is entered about 1.8 miles ENE of the E entrance point of Hamanokuri Wan. Vessels of moderate size can anchor in Mizuno Ura, in depths of 14.6 to 18.3m, mud. A light is shown on the NE side of Mizuno Ura.

**Kishuku Ura** (32°46'N., 128°46'E.) is entered about 1.8 miles NE of Mizuno Ura. The bay affords anchorage to small vessels with local knowledge.

Leading lights, shown from columns with white rectangular topmarks, are situated within the entrance on the S shore of the inlet; the lights in line bear 196°.

A short breakwater is situated 0.2 mile N of the front leading light. A light is shown from the E end of the breakwater.

Kamo Se, a group of rocky islets, lie about 0.8 mile W of Ikokushi Bana, the N extremity of Fukue Shima. The highest rock is about 37m high, and is the northernmost of the group. A light is shown from Ikokushi Bana.

Tanoura Seto is located between Fukue Shima and Hisakajima, and is about 1 mile wide except at its S end; the fairway is 0.5 mile wide. The shores of the strait are free from off-lying dangers and can be approached to a distance of 0.25 mile. Toki Wan, on the SW side of the strait, is available to small craft with local knowledge. Kashino Ura is entered close SE of Toki Wan and affords anchorage to small vessels.

Tatara Shima, 166m high, is located in the SE entrance to Tanoura Seto; a lighted tower stands on the N extremity of the island. A lighted buoy is moored 0.4 mile N of Tatara Shima Light.

## Hisaka-Jima

**5.50 Hisaka-jima** (32°48'N., 128°52'E.) is a hilly island with rocky shores; its W side rises steeply to a summit of hills from 244 to 343m high.

Hisaka Wan, an inlet that almost divides the island into two parts, is entered from the N side of the island. The entrance channel is tortuous and in places not more than 0.1 mile wide, but it gives access to a completely landlocked basin. The village of Hisaka, at the S end of the inlet, has a small pier, 107m long.

Vessels with local knowledge can obtain good anchorage, in 14.6 to 18.3m, mud, in the main basin, or in 9.2 to 11m, in the inner basin of Hisaka Wan. Entry in bad weather is difficult.



## Naru Seto

**5.51** This strait lies between Hisaka Shima and Naru Shima and its fairway is not less than 0.5 mile wide. The shores on each side consist of steep rocky headlands, fringed with sunken rocks extending a short distance offshore. Kurosaki Bana, the W extremity of Naru Shima, forms the N entrance point at the NW end of the strait. A light is shown from Kurosaki Bana.

Okushi Wan, on the NE side of the strait, is well-sheltered, and can be used as an anchorage by vessels with local knowledge, in depths of 18.3 to 20.1m, sand.

**Suzuno Ura** (32°50'N., 128°55'E.) lies on the E side of the strait, about 2 miles SE of Okushi Wan. The bay is mostly foul and a light is shown from a point W of the bay.

Ura Ko lies on the E side of the strait, close S of Suzuno Ura. Anchorage is available, in about 18.3m, in the middle of Ura Ko, about 0.4 mile within the entrance. A floating pier at the village of Ura is about 39.6m long, with depths of 4 to 6.1m alongside.

## Naru Shima

**5.52** Ainoura Wan, a long narrow inlet which penetrates the N coast of Naru Shima for a distance of nearly 2.8 miles, is entered between Unoko Shima and No Se, about 0.5 mile to the E.

Vessels with local knowledge can obtain anchorage in depths of 14.6 to 16.5m, sand, about 0.8 mile from the head of Ainoura Wan.

## Takigawara Seto

**5.53** This strait separates Wakamatsu-jima from Naru Shima. The fairway of the strait is deep and free of dangers.

**Arifuku Shima** (32°56'N., 128°56'E.) lies on the NE side of the NW end of the strait. It is 234m high, wooded, and cultivated. There are no dangers more than 0.1 mile from its SW coast. A light is shown from the W extremity of the island.

Takigawara Ura is entered between KanSaki Bana and Takasaki Bana, nearly 1 mile to the SE. Vessels with local knowledge can obtain anchorage near the head of the bay, clear of the strong tidal currents at the entrance. Takasaki Bana forms a good landmark for vessels entering the strait from the SE.

**Hebo Shima** (32°50'N., 129°00'E.), a prominent islet, 73.5m high, lies in the SW approach to the strait, about 2.3 miles SSE of Takasaki Bana.

**Directions.**—A vessel approaching the strait from the W should make Arifuku Shima, which is a good landmark, and on nearer approach, Aino Shima will be easily identified. Approaching from the SE, Hebo Shima is prominent, as is Takasaki Bana.

## Wakamatsu-Jima

**5.54** This rugged island lies between Takigawara Seto, on its W side and Wakamatsu Seto, on its E side. The island is nearly divided into two parts by an inlet on its NW side that terminates in three narrow creeks.

**Hino Shima** (32°55'N., 128°58'E.) is located about 0.5 mile ENE of Arifuku Shima, on the W side of the entrance to

Wakamatsu Seto. The island is high, well-wooded, and conspicuous. Close off its N extremity is a doubled headed rock, close offshore. Ko-jima, a pointed islet covered with pine trees, lies off the NE side of the island. A rock, with a depth of less than 1.8m, lies close off the SE extremity of Hino Shima.

Miyano Seto, a narrow channel only available to small vessels with local knowledge, separates Hino Shima from Arifuku Shima. In the N approach to the channel, about 137m N of the NE extremity of Arifuku Shima, there is a double-headed rock, 0.6m high.

**Ryosei Shima** (32°55'N., 128°58'E.), close S of Hino Shima, is partly wooded and has three summits. The middle summit is the highest; the N summit the sharpest.

**Anchorage.**—Vessels can obtain anchorages, outside the tidal currents, between Hino Shima and Ryosei Shima, with shelter from all winds, except those between the E and S.

Small vessels can obtain anchorage, between Ryosei Shima and Tenjin Shima, close E, with sand bottom, and clear of the tidal current.

Anchorage can be obtained, in 32.9 to 36.6m, sand, off the entrance of the three arms at the head of the unnamed inlet on the NW side of Wakamatsu-jima.

Local knowledge is essential in all the above areas.

## Wakamatsu Seto

**5.55** This strait lies between Wakamatsu Shima and Nakadori Shima. Its S half is very narrow and obstructed by islets and reefs. The tidal current is very strong and no attempt should be made to use it without local knowledge.

**Kushi-jima** (32°57'N., 128°59'E.), on the N side of the NW end of the strait, is thickly wooded and high; its coasts are rocky and its several points are fringed with above-water rocks; close off its SW extremity is a rocky islet, 30.5m high. A light is shown from the NW extremity of the island.

Oura Uchi, midway in the strait on the E side, has several arms suitable for small vessels with local knowledge. Anchorage can be obtained, in a depth of about 27.4m, in the middle of Oura Uchi, or in a depth of about 22.9m, in Arakawa Ura, the NE of the coves in Oura Uchi, but local knowledge is essential.

**Wakamatsu Ura** (32°53'N., 129°01'E.) lies on the W side of the strait, about 2 miles SW of Oura Uchi. Anchorage can be obtained in the middle of the inlet, in depths of 21 to 22.9m, sand. The village of Wakamatsu lies at the head of the inlet.

## Nakadori Shima

**5.56** Ore Shima, an islet 87m high near its N end, is located about 2.5 miles NE of Kushi-jima Light, on the W side of Nakadori Shima. Shugen-jima, about 1 mile N of Ore Shima, is 154m high, with foul ground on its N and E sides. Two beacons, situated 1.25 miles NE of Ore Shima, in line bearing 070.5°, lead between lighted buoys marking shoal water extending NE from Ore Shima and S from Shugen-jima.

**Aokata Wan** (32°59'N., 129°02'E.) affords anchorage to vessels with local knowledge, in depths of 16.5 to 18.3m, off the entrances of the inlets in its SE part. Special care is necessary as there are submarine cables in the central part of the bay. A light is shown from Hitutu Se, on the E side of Aokata Wan.

Aokata Ko, situated at the head of Aokata Wan, is protected by two breakwaters. Lights are shown from the head of each breakwater, and from a sea berth on the E side of Ore Shima. The harbor limits for Aokata Ko are drawn SSE from the W end of Shugen-jima and ENE from the E end.

There are depths of 26m alongside the sea berth. A submarine pipeline is laid from the vicinity of the sea berth E across Aokata Wan. There are five floating oil tanks on the S side of the longer breakwater.

Nama Wan is entered NE of Yakatame Saki, a remarkable rock, 96m high, lying about 2.5 miles NE of Shugen-jima. The E entrance of the bay is fringed with rocks that dry, and foul ground extending 0.2 mile offshore in places. The village of Nama is situated on the W side of the head of the bay. A light is shown from Yakatame Saki.

Nama Wan affords good sheltered anchorage, in depths of 14.6 to 20.1m. The best anchorage for large vessels is in 20.1m, about 500m offshore at the head of the bay, with the summit of O Shima bearing 342° and just open E of Yagatameo Hana, and a red cliff, on the W side of the bay close N of the village of Nama, bearing 252°.

Small vessels can anchor, in 14.6m, farther E, with **Tsuboke Se** (33°05'N., 129°04'E.) and the extremity of the land on the E side of the bay, in line bearing about 343°.

**5.57 Sao Bana** (32°49'N., 129°04'E.), the S extremity of Nakadori Shima, is located about 2.5 miles SE of Shiro Saki, the S extremity of Wakamatsu Shima. Mitsu Se, a group of rocks, lies about 0.5 mile W of Sao Bana. A light is shown from Sao Bana.

**Otona Se** (32°49'N., 129°05'E.) is a steep rock, 0.9m high, and lies about 1.5 miles ENE of Sao Bana. A light is shown from the rock.

Narao Ko is a fishing harbor situated about 1.5 miles N of Sao Bana. A floating pier within the harbor is reported to have a depth of 6.1m alongside. Lights are shown from the harbor entrance.

**Taino Ura** (32°56'N., 129°07'E.), the largest of several inlets on the SE side of Nakadori Shima, is located about 8 miles NNE of Sao Bana. Kaneko Shima, lying in the entrance of the inlet, is almost connected to the E point of the inlet by a reef. Small vessels with local knowledge can obtain anchorage, in about 10.1m. A light is shown from Kaneko Shima and from the head of the inlet.

Aino Shima, 108m high, lies 3.5 miles ESE of Kaneko Shima. A light is shown from the SW side of the island.

Naka Sone and Benkei Sone, with depths of 14.6m, rock, are sometimes marked by tide rips. The former lies about 2 miles NNE of Aino Shima, and the latter about 1 mile farther N.

**5.58 Nanori Se** (32°59'N., 129°14'E.), a rock 23.8m high, about 4 miles NNE of Aino Shima, has foul ground extending about 0.2 mile to the N and S.

Hira Shima, rising to an elevation of 207m in its center, is located about 1 mile N of Nanori Se. The N and W sides of the hill slope gradually to the sea, but on the S side there is a precipitous ridge. On the NE side of the island there is a hill, 101m high, that rises vertically from the waters edge.

Kamoda Wan indents the SW side of Hira Shima. Small vessels with local knowledge can obtain anchorage, sheltered

from the N and E winds, but exposed to the S and W, near the head of the bay. A light is shown from the NW extremity of Hira Shima and from the head of Kamoda Wan.

**Eno Shima** (33°00'N., 129°21'E.) lies about 5 miles E of Hira Shima. The coasts of this island are foul in places for about 2.3 miles offshore. Close off its N extremity are two islets named Takenoko Shima; the larger is 30.8m high. To the N, W, and S of the island lie numerous islets, rocks, and foul patches for a distance of up to 2.5 miles and can best be seen on the charts. A lighted structure stands close offshore on the S side of the island.

O-date Shima, 83m high, on which are two round-topped hills, is located about 4 miles ENE of Eno Shima. Kodate Shima lies on a shoal about 1 mile SE of O-date Shima. A light is shown from O-date Shima.

**Fuku Se** (33°05'N., 129°26'E.) is an above-water rock located about 3.5 miles N of O-date Shima. A light is shown from the rock.

**5.59 Rokuro Shima, Yamaanju Shima, Noanju Shima, and Kashira Shima** lie off the NE extremity of Nakadori Shima.

**Arikawa Wan** (33°00'N., 129°07'E.) is entered W of Nokubi Saki, which lies about 2.3 miles WSW of the W extremity of Kashira Shima, and in it are a number of rocky islets and dangerous shoals. On its S side, Sakuraga Take and Takanosu Yama are prominent. The town of Arikawa lies in about the middle of the S side of the bay. A light is shown from a point close N of the town. Three lighted buoys mark dangers on the W side of the bay. The town fronts an artificial harbor, with a floating pier, 59.4m long, and a depth of 4m alongside.

The bay affords anchorage to large vessels with local knowledge, sheltered from all winds, except from the N and E. Caution is necessary because of the many fish nets lying in the bay.

From the head of Arikawa Wan, the coast trends about 10.8 miles N to Tsuwa Saki, the N extremity of Nakadori Shima. A light is shown from Tsuwa Saki. Mae Shima, 81m high, lies 1 mile offshore, about 2 miles SE of Tsuwa Saki.

**Tan Se** (33°09'N., 129°08'E.), a conical islet, lies about 0.5 mile NE of the N extremity of Mae Shima. Rocks extend about 0.1 mile out from the islet on the W side. No attempt should be made to pass between Mae Shima and Tan Se.

NoSaki Shima is located N of Nakadori Shima and the strait between its S end and Tsuwa Saki is about 0.3 mile wide. Its summit, which is 350m high and thickly wooded, lies near the N end of the island. A red scar on the W side of the summit makes the island easy to identify.

**5.60 Kebuta Se** (33°12'N., 129°09'E.) lies about 0.3 mile E of the NE extremity of NoSaki Shima. The passage between them is foul and should not be attempted.

Mu Shima is rounded and 74m high, and lies about 0.5 mile NNE of the N extremity of NoSaki Shima. The island forms the S side of Ojika Seto.

No Shima, 62m high, lies close N of Ojika Shima (33°12'N., 129°09'E.).

**Ojika Seto** (33°14'N., 129°06'E.) lies between No Shima and Mu Shima on its S side, and Tera Shima and Uku Shima on its N side is not less than 1 mile wide, but in its center is Ai Se, a black pointed rock, 4m high. A light is shown from the rock.

Kuromo Se, in the E approach to Ojika Seto is a steep-to group of rocks, 13.1m high, lying about 2.8 miles ENE of the summit of Mu Shima. A light is shown from Kuromo Se.

## Uku Shima

**5.61 Uku Shima** (33°16'N., 129°07'E.) is the N island in Goto Retto. The coasts of the island are indented, and several of the bays afford shelter to small vessels with local knowledge. Shirono Take, in the center of the island, rises to an elevation of 259m.

Tera Shima is a rugged islet, 37m high, composed mostly of lava; its N end is a narrow peninsula, from which a light is shown. The islet lies close off the SW side of Uku Shima.

**Tsushimase Hana** (33°18'N., 129°08'E.) is the low N extremity of Uku Shima, and from it a steep-to reef extends about 0.3 mile to the N. A light is shown from the point.

Koshiki-jima is a group of three islets lying about 2.5 miles E of Tsushimase Hana. A light is shown from the middle islet of the group.

**Nagasaki Hana** (33°16'N., 129°10'E.), about 2.5 miles SE of Tsushimase Hana, is the low E extremity of Uku Shima, and from it foul ground extends about 0.5 mile to the E. A light is shown from the point.

Taira, a village, protected by a breakwater, lies at the head of a cove with a sandy beach, about 1 mile WSW of Nagasaki Hana. A light is shown from the head of the breakwater.

**Ojika Shima** (33°12'N., 129°03'E.) lies about 3 miles NW of Tsuwa Saki. A barren hill, 58m high, lies on the N end of the island. At the NE end of the island are two conical hills, N and S of each other. No Shima, 62m high, lies close off the middle of the N coast of Ojika Shima.

Kuro Shima lies close SE of the SW extremity of Ojika Shima, with a shoal between them. There are two breakwaters near the N end of the island. A light is shown from the N breakwater.

**Kokuro Shima** (33°11'N., 129°04'E.) is situated about 0.5 mile ENE of Kuro Shima; the narrow channel between it and the S coast of Ojika Shima is shoal.

Madara-jima lies close W of the W extremity of Ojika Shima. The summit, 126m high, lies on the E side of the island. A light is shown from the NW extremity of Madara-jima.

Koji Shima, Yaburogi Shima, Uu Shima, and O Shima lie 0.75 mile to 2.5 miles S, respectively, of Madara-jima. The passages between the islets are mostly foul and not recommended.

**5.62 Aka Shima** (33°12'N., 128°59'E.), 103m high, lies about 1.5 miles SW of Madara-jima. Its summit rises steeply from its S side and rounded topped hills lie at the W end of the island. There are a number of above-water rocks close off its NW side.

Hoge Shima, 62m high, lies 1.25 miles S of the SE extremity of Aka Shima. Its summit, located at its S end, rises precipitously from the sea, and its N end is a hill, the two being connected by a natural arch that is prominent from the W.

O Shima, 105m high, is located 1.25 miles E of Hoge Shima and has a vertical cliff on its NW side with a clump of trees on its summit. It is prominent from the S and W.

A lighted tower stands on the SW extremity of the reef extending 1 mile SW of O Shima.

**Kura Shima** (33°12'N., 128°55'E.) lies 3 miles W of Aka Shima. The islet rises to an elevation of 120m. Hoage Se, about 0.5 mile NW of Kura Shima, consists of two pointed islets. Shakushi, which dries, lies 0.75 mile NNE of Hoage Se and is usually marked by breakers.

**Mira Shima** (33°10'N., 128°54'E.), 139m high, lies about 1.8 miles SW of Kura Shima. The island consists of two summits, N and S of each other. Hira Shima lies 0.75 mile S of Mira Shima.

**Shiro Se** (33°11'N., 128°48'E.), the W islet in the N part of Goto Retto, lies nearly 16 miles W of Tsuwa Sakii; it appears to be split into two parts from its summit to the HW mark. Several above-water rocks lie within 0.1 mile N of it; another above-water rock is close to its S side. Shakushi Iwa, with a depth of 2.7m, rock, lies about 0.4 mile N of Shiro Se. A light is shown from Shiro Se.

Korai Sone, with a depth of 4m, rock, lies about 6 miles SW of Shiro Se; it is located near the S end of a rocky shoal, with depths of less than 18.3m.